Clinical Lecture

ILLUSTRATING

ANTISEPTIC SURGERY.

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CASE I.—EMPYEMA.

GENTLEMEN,—We have here the little boy on whom, at a former lecture rather more than three weeks ago, you saw me operate, letting out a large quantity of thick yellow pus from the left pleural cavity by free incision in the infra-axillary region. You have seen him, several of you, from time to time in the ward; but I am anxious that you should have the better opportunity which is afforded by the theatre of seeing the progress of the case. This dressing was put on three days ago; on that occasion it was changed after an interval of five days. There is no real need that I should change it to-day, but I do so for the sake of showing you the boy's condition. Now that I have removed the dressing under the spray, you observe that it is almost free from discharge of any kind; it is, in fact, dry. I shall withdraw the silver tube that we have in the wound for the purpose of draining the pleura. This tube is filled, as you see, with white lymph, and it was because I saw this lymph in the orifice of the tube that I thought it well to take it out to make sure that the passage was clear. By turning the boy on his side, so as to make the opening the most dependent part, I am able to empty the pleural cavity completely.

It turns out, as I suspected, that the lymph in the tube had obstructed it. The perfect dryness of the dressing, combined with the appearance of the lymph, made me suspect this; and you see we have obtained from the child one ounce, not of pus, but of slightly tinged serous fluid. I should have been better pleased, for the child's sake, to have found, as on former occasions in this case, an entire absence of any fluid in the pleura; but for your sakes I am glad to see this serum, because it illustrates all the more strikingly the effects of antiseptic treatment. For I venture to say that this purely serous accumulation could not have occurred without antiseptic management.

Let me remind you of the principal features of this case. The left pleura was greatly distended with pus; the heart was pushed over to the right side, so that its apex beat at the right nipple. Aspiration had been repeatedly practised by the physician under whose charge he had been, with the usual result of aspiration in empyema—reaccumulation of the fluid, and that fluid always yellow pus. We opened the pleural cavity by free incision antiseptically, and from the time it was opened we have had no more purulent discharge. Now I do not hesitate to say that that sort of result could not have been obtained without compliance with two conditions—viz., affording free drainage to the fluid, and, at the same time, preventing the access of putrefaction. The failure of the aspiration has shown you that relief of tension of a merely temporary character is not sufficient. Aspiration removes tension for the time being; but the fluid soon reaccumulates in sufficient amount to reproduce decided tension; and that tension, acting in a reflex manner through the nervous system, brings about inflammatory excitement of the pyogenic membrane, into which the pleura has been converted by disease, and so reproduces the suppuration, on the same principle as it had been maintained previously. Therefore mere temporary relief of tension is not enough; we must have the permanent relief afforded by free drainage. But if, on the other hand, we had provided the free drainage, and at the same time not adopted efficient antiseptic means, we should, we may be quite sure, have had a continuance of the suppuration; because, though tension would have been prevented, the irritation of putrid liquid would have acted on the pyogenic membrane of the pleura, and this could not have failed to stimulate it to pus-formation. In the present case, the tube having become accidentally obstructed, there has been again a little accumulation, not sufficient to reproduce suppuration—only an ounce of it; and this accidental circumstance has given you the opportunity of seeing for yourselves, in a perfectly indubitable manner, that the fluid effused has been serum, not pus. You have thus before you a striking illustration of the beautiful pathological truth that a pyogenic membrane ceases to suppurate when freed from irritation. Had I shown you a dressing soaked with serous discharge, you might perhaps have thought, "Are we quite sure that there is not here some pus, masked by some action of the carbolic gauze upon it?" But when you have the serous fluid before you unmixed, as it is in this measuring glass, there can be no mistake whatever.

At the same time that the local condition has been thus satisfactory, the child's general state has been equally so. Before the pleura was opened, he was becoming very much reduced, and the appetite was extremely poor; since the operation, instead of suffering from a temporary fever, as would be likely to be the case if we opened the pleura without antiseptic measures, the little fellow has suffered no febrile disturbance whatever, but from the first began to improve, and is now like a different child, taking his food well, and increasing in strength from day to day.

It is worth while to remind you of the means by which these results have been obtained. In the first place the skin was well washed with the 1 to 20 watery solution of carbolic acid, which has the power of penetrating the epidermis and hair-follicles and any greasy dirt that there may be on the skin, so that it is quite unnecessary to do as many of our German friends do, wash the skin with soap-and-water and afterwards with sulphuric ether. Give the carbolic lotion a little time to act, and it will be sure to purify the integument.

In the next place, the instruments and hands having been cleansed with the same antiseptic lotion, we made an opening into the pleura under a thoroughly trustworthy carbolic spray. This, perhaps, of all cases of antiseptic surgery, is that which, on the one hand, most tests, and on the other most demonstrates, the efficacy of the spray. It tests it severely, because at every inspiration there is a drawing in of air in some form into the pleural cavity. If the patient is an adult, we can say to him, "Hold your breath," at the moment we make the incision; "Hold your breath," at the moment when we take off the deepest part of the gauze in changing the dressing; but with a young child, who is not amenable to persuasion, we can have no control over the respiration, and consequently during the operation, and also afterwards, at every change of dressing, air is drawn freely into the pleural cavity in some form or other. It is therefore necessary, if the spray is to be effectual, to be particularly careful to have a thoroughly reliable apparatus for its production, and that all our manipulations are so conducted that there shall never be a chance of any air other than spray being introduced.

Empyema is, therefore, a case requiring very special care in the use of the spray; but if that care has the effect of preventing putrefaction—and that this has been the case here is amply proved by the fact which you have all had the opportunity of verifying as I handed round the glass—viz., that the serum which has been accumulating for days is, nevertheless, absolutely odourless,—if, I say, we avoid putrefaction completely from first to last, under the circumstances of empyema treated by free drainage, this is a complete proof of the efficacy of the spray. The pleura has been filled again and again in the course of these three weeks with atmosphere in the form of spray, and there can be no reasonable doubt that if ordinary unpurified air had entered in the same manner, carrying in its dust through the free opening, putrefaction would have occurred within the pleura. We have here, therefore, as good evidence as any experiment in a laboratory could afford of the power of the spray to correct the septic property of the atmosphere, or, in other words, to destroy the energy of the septic ferments which the atmosphere contains.

In the next place we have used carbolic gauze as a dressing. We have improved upon this gauze of late. The proportions we used of the ingredients were originally one part of carbolic acid to five of common resin, and seven of paraffin, the paraffin being added to prevent undue adhesiveness. We have now changed these proportions to one of carbolic acid, four of resin, and four of paraffin. By that means we have in the first place a gauze dressing with half as much carbolic acid again in it. It turns out that this is not too irritating, and therefore that is a great improvement; for the gauze is of course more efficacious antiseptically in pro-

portion as it has more carbolic acid in it. From the diminution of the paraffin we have a little more adhesiveness, but that, I think, is positively an advantage. We do not find it causes any serious inconvenience, and on the other hand, it tends to prevent the disposition of dressings to slip upon the skin; it helps to keep them more securely in place. And then I may mention as a secondary, though not insignificant advantage, that though we thus increase so considerably the proportion of the carbolic acid, which is the most expensive ingredient, we have not added to the cost of the materials as a whole, because pure paraffin[1] is so much more expensive than resin, that by diminishing the proportion of paraffin to the resin, we have cheapened the article more than we have enhanced its price by increasing the quantity of carbolic acid, so that the gauze is rendered slightly cheaper by this alteration of our proportions.

The gauze has been employed in the usual manner in eight layers, with a piece of mackintosh under the outer fold; but in a case like this we have also used the gauze in large amount in the form of loose-folded pieces underneath. In the earlier stages this is of great importance, because the flow of serum that takes place from the unsupported pleura in the earlier stages is exceedingly copious; therefore we have made the mass of gauze more than usual. In the adult it becomes necessary to change the dressings twice a day in these cases, but in this child the discharge being of course much less, once in the twenty-four hours proved sufficient.

Then, gentlemen, as to the keeping of this gauze dressing in position, you saw the elastic bandage round the edges of the dressing applied just sufficiently to bring the elasticity of the band into play, and so ensure that the edge of the dressing is always in contact with the skin, and thus, in spite of the respiratory movements, we get accurate apposition of the dressings, a point of great value with reference to the security of our results.

With regard to the kind of tube employed for drainage, for the first few days we had one of caoutchouc, as usual. There was only this difference as compared with its use in ordinary wounds: that into each of the two loops of silk connected with its orifice we introduced a substantial mass of gauze (soaked, like the deepest pieces of loose gauze, in the carbolic lotion), to make sure that the tube should not be sucked into the pleural cavity, as it might be if there were only the silk thread applied to the skin. If the drainage-tube were to enter the pleural cavity we should probably never be able to get it out again; and although it might perhaps lie there without causing disturbance, the occurrence is certainly one to be avoided. But in the course of a few days we found, as is usual in empyema treated by drainage, that the tendency of the thorax to contract on that side produced approximation of the ribs, so as to compress the india-rubber tube and interfere with the free flow of the discharge through it. We therefore substituted the metallic tube, about three-quarters of an inch long, long enough to go thoroughly into the pleural cavity, with a collar of metal to prevent it from slipping in, the tube being rounded at the end, with holes at the sides. It is sometimes the practice in Germany to cut away a piece of the rib in these cases to ensure free drainage. This I have not found to be at all necessary: the metallic tube, if used early enough before the ribs have got into contact, answers quite satisfactorily.

We have used carbolic acid in this case, although the child is only three years old. We have also in the hospital a child of only seven weeks, on whom I operated nearly a fortnight ago, on account of atresia aurium, and the head has since been kept enveloped in a carbolic-gauze dressing, without any interference with the infant's health. I mention these circumstances because I learned, to my great surprise, at Amsterdam lately that it was considered by some surgeons an axiom that carbolic acid is so poisonous for young children that it should not be used for them at all; and I have since seen the same doctrine stated in print. Now, gentlemen, consider the circumstances of this little boy. In order to get a sufficiently large dressing on his small body, the carbolic gauze has been made to envelope his trunk from his armpits to his pelvis, and yet he has not suffered constitutionally at all; he has had no carbolic-acid poisoning. This is sufficient to show that there is no need to abstain from the use of carbolic-acid in young children from this fear. You may say, "How is it that we should not have carbolic acid poisoning, while some of our German brethren have it?" I believe the great secret of our comparative immunity from these toxic effects is that we avoid as much as possible all unnecessary action of the carbolic acid upon the tissues. Had I, for example, in this boy's case injected carbolic-acid lotion into the pleural cavity, and done this at every dressing, as some persons might do, I think it is in the highest degree probable that he might have suffered from carbolic poisoning. Or, again, suppose the patient is not a child, but an adult, and suppose after making a considerable wound—as, for instance, in amputation of the thigh—you do as is often done on the Continent, viz., after stitching the edges of the wound together, and putting in drainage-tubes, inject a 1 to 20 carbolic-acid solution with the syringe through the tubes. If I did such a thing as that, I should think it not at all unlikely that my patient might suffer from carbolic-acid poisoning, because the interstices of the tissues just opened by the knife are ready to receive fluid that may be injected with any force towards them; and if you use a powerful syringe, and apply it to the orifice of a drainage-tube with the purpose of clearing out the wound, the cavity will probably be distended by the fluid, and there must be a great risk of having it forced into the interstices of the tissues, and thence passing in abundance by absorption into the circulation. This sort of practice is really quite unnecessary if you have a trustworthy spray, and operate so as to comply with the conditions of our physiological problem from first to last—conditions not difficult to comply with if we know that they are necessary, and keep a proper watch. And, again, in the changing of dressings there are many surgeons who, whenever they change the dressing under antiseptic treatment, make a point of syringing the wound out. There, again, is a most unnecessary application of carbolic acid to the system, and I believe the avoidance of this kind of practice is the principal cause of our immunity from carbolic-acid poisoning. I cannot point to one single instance in which I can be sure that we have had carbolic poisoning of any moment whatever, either in my hospital or private practice during the two years I have been in London.

At the same time I do not deny that in rare idiosyncrasies there may be carbolic-acid poisoning in spite of the avoidance of needless introduction of the agent into the system. I have seen such a thing myself. I have seen, for example, after removing the mamma and dressing with the gauze, the patient begin to suffer, not only from dark urine, which is in itself a matter of no moment, but from general debility, loss of appetite, and other symptoms of carbolic poisoning. We changed the gauze dressing for one of boracic acid, and immediately the symptoms disappeared. We left this boracic dressing on for several days, and then changed it under the carbolic spray; and time after time, as the result of the mere application of the carbolic spray to a limited portion of that lady's integument, did the symptoms of carbolic-acid poisoning return in a few hours, making it indubitable that that particular individual had a special idiosyncrasy for being so affected.

Now it is very desirable that, if such an occurrence should show itself, we should be prepared with means of an alternative character. I have alluded to the boracic-acid dressing. This is very good with superficial wounds or sores, as you have had the opportunity of seeing strikingly exemplified lately in a case of skin-grafting.

[The large callous and foul sore, having been dressed for a few days with moist boracic lint covered with gutta-percha tissue, was purified completely by sprinkling the surface lightly with the powder of iodoform, after washing the surrounding epidermis with strong watery solution of carbolic acid. Prepared oiled silk (protective) dipped in boracic lotion was then applied to the sore, and covered with boracic lint overlapping well in every direction. A similar dressing of oiled silk and boracic lint was applied every third or fourth day, until the granulations had assumed thoroughly healthy characters, when skin-grafting was performed by shaving a thin slice about a quarter of an inch across, consisting of little more than epidermis, from the inner side of the upper arm, which had been washed with 1 to 40 watery solution of carbolic acid, cutting this into small pieces on the thumb-nail, and placing each, with the raw surface downwards, on the granulations, each graft being covered, as it was deposited,

[1] I regret to find that a crude form of paraffin is sometimes employed in the manufacture of the gauze. It has the great disadvantage that it acts on the caoutchouc of the mackintosh cloth used in conjunction with the gauze, and soon makes it soft and useless. When pure paraffin is used the mackintosh will last for weeks together, and is thus in the long run very cheap, as well as perfectly trustworthy.

with a little bit of the oiled silk dipped in boric lotion. A general piece of the oiled silk rather larger than the sore was then applied, and over this boric lint in two layers secured with a bandage. This dressing was left untouched for a whole week, so as to allow the grafts a long period without mechanical disturbance. We all know how black and foul oiled silk would be if left for a much shorter time upon a suppurating sore without the use of an antiseptic. But here it was quite free from discoloration or odour, while every one of the nine grafts was found to have taken root, and cicatrisation was proceeding at the margins of the ulcer with a rapidity that could not have been hoped for under water-dressing changed daily.]

But we should not like to trust this mild boracic acid for deep-seated affections like empyema. What substitute, then, have we in case of the rare occurrence of carbolic-acid poisoning? I believe the best at present known is salicylic acid, first introduced into surgical practice by Prof. Thiersch, of Leipzig. It may be used in the form of salicylic jute, which is a pretty cheap material. Some weeks ago my friend Professor Bennett, of Dublin, told me of a case of empyema which he had to treat in the country. Carbolic gauze was not obtainable, but he had salicylic jute; he used this after opening the empyema under the carbolic spray, and he directed the country practitioner to apply the salicylic jute at every dressing on the same principle, and the result was a rapid cure after a course similar to that which you have been witnessing to-day. Here, then, we have evidence that in this exceedingly testing case, empyema, salicylic jute may answer the purpose as a satisfactory substitute for carbolic gauze. It must be applied in pretty large mass, and it will be well to have a piece of mackintosh outside, to prevent the discharge soaking directly through it.

CASE II.—LARGE OPEN WOUND.

There is another case which I wish to dress before you to-day—that of the woman from whose back I removed a large recurrent fibroid tumour twelve days ago. This tumour had first shown itself fifteen years since. It had been removed and recurred, removed again and recurred at intervals of three or four years, the woman each time foolishly allowing it to grow to large size before she sought the surgeon's aid. On the occasion of its fourth removal it was found adherent to the spinous processes of some of the dorsal vertebræ, which were accordingly scraped by the surgeon who performed the operation. When the patient again applied to him, with a large tumour in the same situation, he recommended her to my care. Finding the tumour of firm consistence, well defined, and freely movable, except about its middle, where it lay over the spine, and considering its very chronic course, I thought it right to give the poor woman another chance, and accordingly I removed the large mass, taking with it the skin that lay over the growth, about five inches in breadth, and all the scar of the previous operations, the incision being about a foot in length. Finding the tumour firmly adherent to the spinous processes of four of the dorsal vertebræ, I removed those processes in almost their entire length with cutting pliers, and also a considerable mass of spinal muscles in their vicinity, leaving a large hollow in the middle of the back. I was desirous that this deficiency should be closed in immediately if possible, and accordingly, by a plastic operation, I brought a large flap of skin inwards from the right side of the back, to cover it.

FIG. 1.

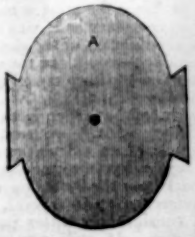
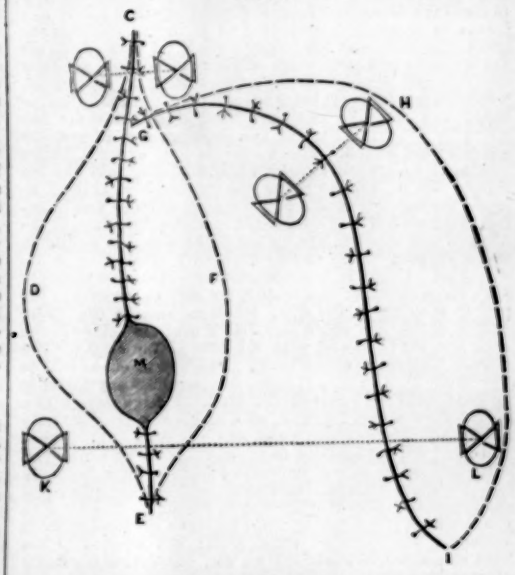


FIG. 2.

In adjusting the flap in its new position, I found great advantage in the use of the button-stitches of relaxation. I have for some time past used the lead buttons with a modification of form which makes them better adapted for their purpose. The plate is cut in the shape represented at A (Fig. 1), having two wings, which are turned up so as to be at an angle of about 45° with the rest of the plate; and round these wings the end of the wire is wound after passing through the central perforation, as shown at B (Fig. 2). This is more readily done and undone than the winding of the wire round the plate as formerly, and at the same time the presence of the wire on the under surface of the plate is avoided, which by its pressure sometimes gave rise to a linear sore.[1] The buttons are represented in position in the accompanying woodcut (Fig. 3), where the coarse dotted lines

FIG. 3.



C D E, C F E represent the incisions made for removal of the tumour, the coarse dotted line G H I the incision which limited the flap of skin raised in the plastic operation, and the continuous lines show the ultimate arrangement after the flap was stitched in place, while the fine dotted lines indicate the subcutaneous parts of the silver wires connecting the several pairs of lead buttons.

I wish to direct special attention to the manner in which the lowest pair of buttons, K L, are arranged, as I have found it very valuable in operations of this kind. While it is desirable, with a view to primary union, that the cutaneous margins should be everywhere approximated, it is of vital importance that the base of the flap, on which the supply of blood is in the first instance entirely dependent, should be protected from undue tension, or from pressure or traction by button or wire. With these objects in view the needle carrying the silver wire which was to connect the buttons was passed through the skin on the right-hand side considerably distant from the edge of the wound, and being brought out at the wound, was entered again beneath the skin at the left-hand edge, and made to emerge at a distance from the wound corresponding with that on the right side. The wire passed in this way did not engage the flap at all, but simply lay beneath it across the raw surface of the wound; and thus when the buttons K and L were pressed home and secured, the result was that while the flap was left entirely unaffected, the edges of the skin at each side of it were, thanks to the yielding of the integument of the trunk, so much approximated that they could be stitched closely to the edges of the flap without undue tension. The sûtures employed were of pretty thick silver wire, with here and there intermediate stitches of carbolised silk or purified horsehair for accurate coaptation. Intervals were left at G and M for the orifices of caoutchouc drainage-tubes. Re-

[1] It is perhaps well that I should mention that this modification of the buttons was introduced before the publication of that suggested by Dr. O. Will, of Aberdeen, for a similar purpose (see Brit. Med. Jour., June 21st, 1879). The form described in the text will, I believe, be found at least as convenient as Dr. Will's, while it is more readily made, either by punching a lead plate, or cutting it into the requisite shape with scissors.

laxation of the skin of the back was also provided for by having part of the bandage which fixed the gauze dressing disposed in figure-of-8 fashion about the shoulders so as to keep them drawn backwards.

It so happened that the patient had reactionary bleeding that afternoon, a very rare thing indeed with us, such as we do not generally see from year's end to year's end, but it did occur in this instance, probably from some muscular branch, and before the dressing was changed the patient had lost a good deal of blood. Tossing about in restlessness she moved her shoulders very much, and by these movements tore out some of the stitches. In this way there was produced a gap towards the base of our flap, a circular opening about two inches in diameter (represented at M in the woodcut) exposing the interior of the hollow wound. I wish you to see the appearances at this stage of the case. I hold my hand over the part of the dressing corresponding to the wound, while the bandages are being cut and the edge of the dressing raised, and only take away my hand when the spray has got fairly under the edge of the dressing, and is over the region of the wound. The wound is now exposed before you, and you see the circular window leading into the interior. We used to say before the introduction of the antiseptic treatment that, if a wound did not unite by first intention, suppuration was established in about four days in the adult in cool weather, and in about three days in a child in warm weather. Here twelve days have elapsed since the operation. Union by first intention was impossible throughout a large extent of this wound, not only on account of the gaping opening in the skin, but also because the under surface of the flap which was drawn over the hollow in the back was not in contact with the floor of the cavity. Yet observe we have no suppuration. I wish some of our friends who doubt whether the antiseptic treatment has any influence for good could see a fact of this kind. Twelve days with a great hollow wound like this, with an opening leading freely into it, and the tissues exposed, and yet not a drop of pus! Now, as I did not hesitate to say that the result which you witnessed in the case of empyema could not have been obtained without antiseptic treatment, so I venture with equal confidence to affirm that the merely serous discharge which you see upon this dressing could not have occurred without antiseptic treatment of some kind; not necessarily the kind of antiseptic treatment we use, but something really effectually answering the purpose of keeping putrefaction out. That the dressing here used has been thus effectual allow me to give you evidence. That dressing has been on the patient two days; you see the oiled silk "protective" perfectly free from the dark discolouration which it would acquire within such a period if putrefaction occurred, and you can ascertain for yourselves as I pass it round that it has no odour of putrefaction. The dressing, then, has been truly antiseptic; it has, as a matter of fact, prevented putrefaction. Observe now the entire absence of inflammation about this wound. It has been so from the first. There is no inflammatory blush whatever, nor has there been from first to last. The day after the operation we saw that the upper part of this flap for about two inches in breadth presented a livid discolouration; looked as if it were about to lose its vitality. I remarked to those of you who were present in the ward, that it did not follow that there would be any death of tissue, although I believe any practical surgeon who had seen the case then would have said that under ordinary treatment there must have been an extensive slough. I said I did not at all despair of this part, to a large extent at least, recovering itself; because, even supposing any portion of tissue has lost its vitality through defective circulation, and suppose that piece of tissue so dead does not putrefy, it does no harm to its neighbours from the mere fact of its being dead, any more than the dead intestinal tissue of the catgut with which we tie our arteries. Catgut is absorbed by the living tissues round about, and so may other dead tissues be absorbed and not in the least offend their living neighbours; whereas, on the other hand, if it does putrefy, the dead piece, being putrescent, becomes a source not only of irritation, but of caustic action, to the parts immediately adjacent. For if one portion of tissue has lost its vitality through interference with the circulation, you may be quite sure in the immediate vicinity other parts will be weakened in their vital power from the same cause, just as in the case of senile gangrene, where we know the liability of gangrenous inflammation to spread. But here you see that the once livid patch has to a large extent recovered itself. It remained discoloured for several days, but we found on firm pressure with the tip of the finger that the colour could be dispelled, and it slowly reappeared when the pressure was removed, showing that the blood was still fluid in the vessels, whereas, if the tissues had been dead, the blood would have been coagulated. There now remains only a little piece of the extreme margin of the flap, an inch and a half long and about half an inch broad, which is not obviously alive. This little bit has actually lost its vitality, but here it remains after these twelve days still firmly attached to neighbouring parts, the stitches which connect it with the living skin still holding. It has induced no suppuration, nor excited the faintest inflammatory blush in the surrounding skin. There is not even an absolutely defined line of demarcation. That, again, gentleman, would have been an impossibility without effective antiseptic treatment. But with such treatment it is a possibility, for I have seen it in larger sloughs than this, that this piece of dead tissue may be absorbed and never separate at all.

One other point about this wound is worthy of your attention. This window, that we see leading into the cavity, was at one time considerably bigger than it is now. It became encrusted at its borders by exuding liquor sanguinis, which, coagulating, formed a solid ring within it, and this exudation of liquor sanguinis has gone on, producing a broader and broader ring. The parts first formed, remaining free from putrefaction, have undergone organisation, including vascularisation, and the newly-formed vessels have continued to pour out plasma. And now, if we turn up the superficial layer of the coagulum at its outer margin, we see disclosed a ring of cicatrix. That is to say, the organisation of the ring of coagulum has assumed the character of epidermic formation in the vicinity of the pre-existing epidermis of the cutaneous margin. And this process of cicatrisation has been going on without the production of any pus, and even without the formation of any true granulations. I never happened to see anything exactly corresponding before. But this is, doubtless, simply because I never before had the opportunity of studying a window like this in a piece of skin stretched over a cavity. For we have here only a peculiar instance of what we are familiar with under antiseptic treatment, the organisation of blood-clot and cicatrisation proceeding under the superficial layer of the coagulum without the occurrence of suppuration or true granulation. It is by virtue of the same process of progressive exudation and organisation of plasma that the cavity of the wound is being constantly reduced. We see, on looking through the window, that the floor of the cavity is not so far below it as it was; the hollow is becoming constantly shallower. Now, all this, gentlemen, presents what must seem to those who have not witnessed it a marvellous and incredible contrast with the old mode of healing by granulation and suppuration, which must infallibly have occurred without antiseptic treatment.

I now reapply the dressing. The protective, dipped in the 1 to 40 watery solution to destroy the septic property of any dust adhering to it, is applied over the healing wound. Immediately over this is placed a piece of the carbolic gauze, dipped also in the lotion, to ensure that it is actively antiseptic when applied, for the dry gauze cannot be trusted in this respect, and over this the regular gauze dressing of ample dimensions. Remember the immense importance of having the protective overlapped well on all sides by the gauze. The protective, having nothing antiseptic in its composition, must be overlapped just as if it were itself a wound.

The bandage is so arranged as to brace the arms somewhat back, though that is not now so necessary as it was in the first instance. Here again, from the liability of the chest to movement, we use the elastic bandage—one piece round the shoulders and another round the waist—to keep the edges of the dressing constantly applied to the skin.

The attainment of the results which you have seen in this case depends not only on the efficacy of the antiseptic measures used, but also upon the use of an efficient protective, as we term it—that is to say, a layer of material employed to protect the healing part from the irritation of the antiseptic itself. And with reference to this point, I may mention that we have now a considerably better protective than we had some time ago. It still consists essentially of oiled-silk, varnished on both sides with copal varnish. The copal varnish is the principal agent in this protective for keeping the carbolic acid out; it is much less permeable to carbolic acid than oiled silk is, although oiled silk itself is much less permeable to the acid than gutta-percha

or caoutchouc is. The copal varnish, then, is the most important of the ingredients of which this protective is composed. Some time ago one of the manufacturers who supplied this protective, for reasons best known to himself, omitted the use of the copal varnish altogether, and supplied us with what was evidently mere oiled silk varnished with dextrine (which is put on outside the copal to ensure that the material shall take an antiseptic film when dipped in carbolic lotion). We were supplied then with mere oiled silk brushed over with dextrine, and this is a comparatively ineffective protective. On the other hand, that which we now use is coated on both sides with specially thick copal varnish, and this makes it correspondingly effective. I understand that some persons object to this protective as being too thick and substantial. These gentlemen little know what a mistake they make in thus objecting to it. When it comes to be of the temperature of the body, it becomes perfectly soft and pliable; it applies itself beautifully to the part, so that there is no objection to it on that score. If we had not used a pretty effectual protective, we should not have had the kind of results you have seen in this case. If we had had a carbolic-acid dressing acting directly on the tissues of that exposed wound we should have had before now granulation and suppuration—suppuration occasioned by the irritation of the antiseptic—"antiseptic suppuration," as I have termed it; and if we had had the gauze dressing directly applied to that piece of dead tissue, it would have been impregnated with the pungent antiseptic, and would have become chemically stimulating on the same principle, though in a less degree, as if it had been putrid; it would have stimulated its living neighbours and urged them to granulation and suppuration, and we should have had a piece of dead tissue already separated by antiseptic suppuration.

Again, if we had not used a pretty efficient protective, we should not have seen the blood-clot organised and cicatrising without suppuration at the edge of the window in the skin. We should have seen it with a granulating and suppurating margin. I am induced to speak on this point because I believe the protective is often as yet imperfectly understood. A very eminent surgeon was round my wards some months ago, and he told me he had never seen the organising blood-clot. I took him to two cases in which it was occurring. He was a man of scientific precision, and he at once said, "These cases are enough for me; I know from this time that an exposed blood-clot may become organised." How was it he had never seen it, for he had practised antiseptic treatment with great efficiency for years? The truth was, as he told me, he had not thought the carbolic acid particularly irritating, and he had never used any protective at all, and therefore had never seen an organising blood-clot. I had sent to me some time ago by a very distinguished Russian surgeon this beautiful-looking article—this transparent film,—which he told me he now always used in preference to our protective—a most lovely thing, certainly enough to charm us to use it by its mere beauty. But I found it would not stand the test which will enable you always to ascertain the quality of a protective. I took a piece of it, and put upon the middle of it a little bit of lint soaked with 1 to 20 carbolic-acid lotion, and left it awhile; in the course of about half an hour, on applying the tip of my tongue to the other side, I perceived the pungent sensation caused by carbolic acid, showing that it had already gone through it; whereas, with a piece of this properly made protective, treated in the same way, you would find, after the lapse of three or four hours, absolutely no trace of the acid. Therefore, although this so-called protective is very pretty, it is scarcely a protective at all in the sense in which we use the term. It will keep the wound moist, and thus prevent the dressing from striking to it, but that is nearly all it will do.

But worse remains to be told of this elegant article. The chemist who sent me the samples informed me that it contained thymol and salicylic acid in its composition; in other words, it was not only inefficient as a protective against the antiseptic, but it was actively antiseptic in its own substance. And he added, it could be made up with carbolic acid; showing that he had no idea whatever of the object for which we use the protective. It has been said sometimes that our dressings irritate wounds. The wound you have just seen is an instance to the contrary. It is not irritated; it is healing kindly, and not only so, but it shows very much less marks of irritation than you could get with any ordinary treatment that has been devised. But if surgeons use the antiseptic agent, whatever it be, in such a way as to act directly on the tissues, they will necessarily have their wounds more or less irritated according to the nature of the antiseptic they employ.

But, useful as a protective is in promoting the best kind of healing under an antiseptic dressing, I desire to say, by way of warning, that it would be infinitely better to use no protective at all than to employ it amiss; for, though at the risk of seeming tedious, I must repeat that in proportion to the efficiency of the protective in excluding the irritation of the antiseptic, is its power to exclude also its antiseptic virtue, and thus to conduct putrefaction inwards to the wound, unless it be overlapped well on every side by the really antiseptic element of the dressing.

[In preparing this lecture for the press, I may add that, on examining the wound yesterday (Dec. 9th), I found that the still serous discharge had become so slight that my house-surgeon had allowed four days to pass without changing the dressing. The buttons had been removed several days before, yet the cutaneous margins remained everywhere in contact, except that a gaping of about three-quarters of an inch had occurred at the lower part of the window, M, after the removal of the buttons, K and L, which especially supported that part. But though the window had been from this cause temporarily increased in dimensions, it had since been reduced to less than its former size by the same mode of healing that it had before presented, and, while suppuration was still absent, the border of cicatrix had considerably increased in breadth. The window was occupied by a grey pultaceous mass of lymph, which was the nearest approach to suppuration that had been seen throughout the case. I clipped away about one-eighth of an inch of this grey substance with scissors, when blood oozed from the incision, showing that vascularisation had occurred almost to the surface. The process of healing by successive exudation and organisation of plasma, which I think has never before been distinctly described, but which this case has so beautifully illustrated, had entirely closed the great cavity of the wound. And the new tissue thus developed having, like new tissues generally, a tendency to shrink as it grew older and more perfect, the skin of the flap covering the cavity—which in the first instance was stretched straight across from scapula to scapula, had been drawn down somewhat into the hollow, so as to present a concave appearance, while the part felt firm and solid under the finger.

At the same time my anticipations of possible absorption of the slough without suppuration had been already partially justified. Whether the slough originally involved the whole thickness of the cutis or not, I have no means of knowing. Certain it is that the stitches which attached the edge of the flap at the site of the slough still retained their hold, and the border of the mass of dead tissue thus kept in contact with the healthy living skin had undergone a process of organisation—that is to say, of substitution of living tissue elements for the dead which they absorbed—exactly similar to that which had occurred at the border of the window in the skin. And thus, without the slightest trace of suppuration and without the occurrence of granulation, a cicatrix about one-sixth of an inch in breadth had come to occupy the place of the upper border of the slough.]

THE ACTION OF SALICIN AND SALICYLIC ACID IN ACUTE RHEUMATISM.[1]

BY WILLIAM SQUIRE, M.D., F.R.C.P.

THE subject is divided into two parts: the first dealing with the therapeutics of acute rheumatism generally; the second specially with the effects of salicin and salicylic acid on the disease, and with the objections raised to its use.

The treatment of rheumatic fever with iron has certain advantages over that by alkalies, and many methods show better results than the expectant; none of them, before the use of salicylic acid, would markedly lower the fever and shorten its duration, or lessen the liability to heart disease, or diminish the anæmia of convalescence, with its tendency to relapse, nor will this means altogether prevent these risks. In all cases of acute rheumatism we find—(1) increased tissue-change; (2) checked elimination; (3) ready febrile

[1] Abstract of paper read before the Harveian Society, Nov. 20th, 1879.

reaction of a special character. To these three conditions treatment has always been directed, the success of the means employed being very much in proportion to the power exercised over the last. As the fever is intensified by the local accident to which it gives rise, direct applications to the joints are useful. Whatever relieves pain reduces fever, and local vascular tension has here to be relieved; only when this is very limited is colchicum or aconite of use. Bleeding and purgatives fail to do good, as all evacuants fail when carried beyond what tends to restore the balance of elimination. Any excess of fibrin in the blood is not to be prevented by such means. Hyperinosis is a direct consequence of the febrile state, and is diminished by whatever controls fever; fever is actually increased by some eliminative means, as by sweating under blankets; quinine, and even digitalis, have been used with advantage in the fever. Against the hyperpyrexia, sometimes met with, the cold bath is effective, and to this condition its use is restricted. In all plans of treatment complete rest is essential; liquid nourishment or milk diet is required, with free use of diluents.

Details of eight cases treated by iron, and of eight treated by the salicylates, were brought forward. Of the former series, one case, following mumps, began with pericarditis, and one had endocarditis after the puerperal state; of the latter series, one case, following measles, had no cardiac affection, and the others, after varicella, began with endocarditis. This is often the first sign of rheumatism in children; in their slighter febrile ailments the heart should always be examined. Rheumatism is readily induced where tissue-change has been rapid. It may occur so early in scarlet fever as to be considered part of the disease. After diphtheria, and whenever, in children, acute rheumatism has followed quickly on the specific fever, the iron treatment is specially useful. Nor need cardiac mischief preclude its use: it acts more as a sedative than as a tonic, and diminishes irritability, while it favourably modifies the inflammatory products; any increase of blood-pressure can be kept down by laxatives and perfect rest in bed, or further lowered by chloral at night. The great use of salicylic acid is, that by shortening the fever the risk of heart complication is lessened; and if the heart be already affected, no remedy can act better. It slows the pulse, lowers the blood-pressure, and diminishes vascular tension; the fever is controlled better than by quinine; pain is relieved better than by sedatives; no secretion is checked: the natural crisis of the disease is hastened; the subsequent anæmia is less, and the convalescence quicker, than after treatment by iron. Kidney disease, chronic or acute, is an obstacle to the free employment of salicylic acid. Other conditions may arise where a choice has to be made between the use of iron and of the salicylates; one or the other must be adopted, they cannot both be used at once.

Salicylate of soda may be given to patients at all ages, and in all stages of the disease; not only is cardiac disturbance quieted, but the pulmonary congestion, meteorismus, diarrhœa, and profuse perspiration of persistent rheumatic fever in debilitated persons, are relieved, and the pale urine, deficient in urea, in these prolonged cases, is soon restored to its normal quality. In acute rheumatism salicylate of soda is preferred to salicylic acid; it is readily soluble, is neither irritant nor disagreeable if well diluted, is more readily absorbed, and its effects are much more prompt, certain, and manageable. Five grains of the salt equal four grains of the acid, a sufficient dose for a child of six or eight years old; adults require three or four times this quantity. It must be given every two or three hours till we have some evidence of its action; this is to be looked for after three or four doses. When six or eight have been given in this way they need only be continued every four or six hours for another day, and can be resumed in the same way if fresh pain or fever arise. Salicylic acid must be converted into salicylate of soda in the blood before its action on rheumatic fever begins; a definite quantity of the acid can be dissolved in presence of potash, lithia, or ammonia, and be so given with or without effervescence. Individual fancies in prescribing are unimportant so long as no other thing than the quantity of acid prescribed is considered as in any way influencing the result to be sought. Salicin and salicylic acid are spoken of together, for, as shown by Senator, of Berlin, in the columns of THE LANCET, salicin, when taken, is converted more or less completely into salicylic acid. It has to be given in larger doses, the therapeutic influence is less prompt and varies with the rapidity of conversion, but is always directly in proportion to the quantity of acid produced. Willow bark yielded salicin to Leroux in 1830; from this in 1838 Piria first isolated salicylic acid. The acid was separated from oil of spiræa and of winter-green by Cahours in 1844; its medicinal properties were investigated in 1855 by Bertagnini, who produced in himself, by taking ninety grains of the acid in two days, the noise in the ears by which its full influence is best known. Salicylic acid made in the laboratory by Kolbe and Lantemann in 1860 was found to be identical with that formed by the plant; its relation to carbolic acid had been previously pointed out by Kolbe, but not until his great discovery in 1874, of how to obtain the one from the other, was it available for general use. Without the noxious properties of carbolic acid, it has greater power to arrest the action of both organised and unorganised ferments, itself undergoing no change; the vitality of the former is destroyed, while the activity of the latter is renewed on removing the acid. For this an infinitely small quantity of the acid suffices; 1 to 20,000 will preserve saccharine fluids from fermentation. The action of such ferments as amygdaline or the myrosine in mustard is as effectually checked by its presence as of diastase, the fibrin ferment, or the lactic acid fermentation. Such an action of salicylic acid in rheumatism is necessary to the full explanation of its influence in that disease; whenever the stage of acid perspiration is reached, then we have the most marked effect of the remedy most rapidly produced. The acid character of the perspiration is acquired only at the skin; the acid products of the change of muscular tissue are formed within the muscle. Salicylic acid is liberated from its soda salt in the blood exactly where the fermentation peculiar to rheumatism can be stopped at its origin; this arrested, time is given for matters acting as the ferment to be eliminated. Herein consists the difference in action of salicylic acid in rheumatism and in other fevers. In typhoid a full dose lowers the temperature, as the cold bath does, but exerts no special action on the disease; a single dose before the febrile exacerbations is here as effective and more safe than smaller repeated doses; in rheumatism repeated doses are most useful. The intimate action of salicylic acid as an antiferment is serviceable in both acute and chronic rheumatism.

Among the secondary or indirect effects of the salicylates useful in rheumatism is that of increasing the excretion of urea and favouring the elimination of uric acid. M. Germain Sée noticed this in chronic rheumatism; and more recently M. Marrot has shown that in the acute attack this increased excretion appears before the joint swelling subsides, and continues after the fever has fallen; so that not merely a removal of febrile waste but a true crisis is induced, similar to what may always be observed before the termination of rheumatic fever. Another good effect is the relief of pain, either by soothing the peripheral nerves or relaxing the small vessels by acting on the vaso-motor centres. The lowered temperature is from its effect on the nerve centres; so is the tinnitus aurium. It slows the pulse and respiration, for it is a pneumogastric sedative, and tones the heart, while it lessens vascular resistance. Contrary to what is seen in other fevers, instead of the dilated vessels allowing a greater production and a greater discharge of heat, the local liberation of salicylic acid checks molecular change, and the production of heat is diminished. Further evidence of this was given in proof of the greater rapidity with which salicylic acid is disengaged and eliminated during an attack than after it is over; hence, during fever a larger quantity of the drug may be well borne, but its action is also more rapid, and requires to be carefully watched.

Many objections to the use of this remedy have disappeared since the dose has been more accurately determined. Less than half a drachm of the acid, or forty grains of salicylate of soda, taken daily by a healthy man, will not produce any marked effects, but fifty grains of the acid or a drachm of its soda salt, taken continuously for two days, will do so; the effects of one drachm of the acid taken at a single dose will also be felt for two days. Sixty grains given to a boy six years old in typhoid fever caused great depression for two days. A drachm of salicylate of soda given one afternoon to a young woman with rheumatic fever caused delirium, which subsided in three hours. A characteristic of nervous symptoms produced by the salicylates is that they subside quickly on discontinuing the medicine, even when during some days such quantities as 360 or 600 grains have been taken, and have produced delirium and albuminuria. Extreme effects produced by 340 grains, given in six hours, by mistake, to a girl at Kiel, were

recovered from in ten days. Some large doses of salicin and salicylic acid, said to be harmless, were probably not all absorbed. Fifteen grains of salicylic acid is the smallest dose reported as producing nervous symptoms. Delirium occurred in two of my cases, and some deafness in one, before giving the salicylates. Symptoms of disease, such as of cerebral rheumatism and of embolism, have been attributed unjustly to salicylic acid. The continuance of extreme doses is of no service in rheumatism, and may be dangerous in typhoid or in erysipelas from pulmonary congestion being either masked or increased.

A too enthusiastic claim of efficacy has been a hindrance to the more general employment of this remedy in rheumatism; the disease is too serious to be spoken of as henceforth an affair of a few days only. Both pericarditis and endocarditis have been known to arise during this treatment. It will neither prevent nor control the danger of hyperpyrexia. That relapses are more frequent afterwards may be doubted; the *onus probandi* rests with those who make the objection. Under other treatment a patient continuously febrile for ten days has no relapse because there is no remission; the tendency to relapse after defervescence has, in all cases, to be guarded against; in this it is readily relieved, and the time in which it is likely sooner over. At the Cork meeting of the British Medical Association, the control of rheumatic fever by salicylic acid was again called in question. Two years before, Dr. Jacob, of Leeds, brought before the Association the results of more than 300 cases so treated, with 63 per cent. relieved in an average of less than three days, and discharged cured in twelve days. Only 3·5 had heart affection. Dr. Brown, of Boston, U.S., and Dr. Cavafy, of St. George's, give even better results. Dr. Oliver Moore, in a very complete treatise on this subject published in the *New York Medical Journal* for August last, gives the following results:—316 cases treated by alkalies relieved in 17·2 days' average, discharged cured in 22·6 days' average; 305 cases treated by salicylates relieved in an average of 2·9 days, discharged cured in 9·5 days' average.

Wherever a smaller series of cases is met with a similar result appears. My own eight cases show relief in less than two days, two of them in less than a day, but they were all kept under care for at least ten days. The average duration of the eight cases treated by iron was fourteen days, half of this febrile, but they required long after-care. Salicylic acid is most useful in the most acute cases of rheumatism, less so in the subacute and chronic; in its power to arrest the special febrile process, at whatever period of the disease it may be given, we have a therapeutic agent of the greatest value. Of the many diseases for which the salicylates have been recommended, excepting Menière's disease, those connected with rheumatism have been most benefited. Severe forms of neuralgia are noticed to alternate with febrile attacks; the vessels spasmodically closed during pain relax when the fever begins, and the pain yields; in such cases, and in one of rheumatic eczema with paroxysms of irritation, relief followed the use of salicylate of soda. The secretion of bile is increased by its use; the acid can be detected in the perspiration, in the fluid from blisters, in the secretion of most mucous surfaces, and in the expectoration during its employment. The claims of salicylic acid as a prophylactic against some infective forms of disease are worthy of further investigation.

NOTES ON THREE CASES OF TETANUS,

UNDER THE CARE OF MR. RIVINGTON, AT THE LONDON HOSPITAL.

BY MAJOR GREENWOOD, M.R.C.S., L.R.C.P. LOND.,
LATE HOUSE-SURGEON.

IT may be said of tetanus, as of any other disease whose pathology is still in a very rudimentary stage, that its study must essentially be dependent on a strict and careful record of the clinical phenomena of all the cases that come under observation, especially at the various medical institutions of the country, where alone such diseases can be perfectly watched, and a trial made with safety of the many powerful auxiliaries constantly placed in the hands of the surgeon and physician by the researches of science. Although but too frequently medicines from whose physiological action great results have been foretold in the treatment of special diseases, when tried practically, have yielded little but disappointment, in few if any has any harm followed the experiment, and numerous are the instances where temporary relief at least has been afforded, and the sufferings of the patient greatly alleviated, although the specific for the disease yet remains undiscovered. In all a valuable clinical fact, although a negative one, has been ascertained. We are able to note what particular effect is produced by a medicine with whose physiological action we are partially acquainted, and can compare the results obtained by its use in special diseases with that seen in experiments on the organisms of healthy animals. There is, however, one error to be carefully guarded against in our use of organic preparations. We must be sure that the drug employed by us is physiologically active, and this is by no means an easy matter; for except by experimenting on some animal just previously to use I see no way of being absolutely certain on this point. In the two cases in which Calabar bean and curare were employed, I can only say they were the best preparations that could be procured. The green extract of the former had been but recently prepared, and the curare used in Case 2 had been tried on a cat two or three weeks before by one of the resident staff of the hospital with perfect success, the muscles of the animal being quite paralysed by a hypodermic injection of half a grain.

CASE 1.—Martha F——, aged fifteen, a well-developed, healthy-looking girl, was admitted on Aug. 25th, 1878, under the care of Mr. Rivington. She gave the following history:—Five days previously, while walking in the garden, she had stumbled against a pitchfork, one prong of which wounded the great toe of the right foot. She was unable to walk immediately after, but in a day or two the wound healed up completely under the application of cold-water dressing. On the morning of the 24th, four days after the accident, she experienced a slight difficulty in articulation, as also in masticating and swallowing her food; later on she complained of pain and stiffness in her neck. On the morning of the 25th her head became retracted and her spine somewhat bent back, while the previously-mentioned symptoms had become intensified.

When seen in the wards shortly after admission she was lying with her head thrown back, her cheeks flushed, and perspiring profusely; every now and then a tonic spasm affected both arms, causing her to flex them rigidly; there was no trace of a risus sardonicus. Her muscles of respiration were slightly affected, as was seen by short, jerky, and irregular inspirations at intervals. Her articulation was accomplished in a peculiar spasmodic manner, a convulsive gasp being taken before attempting to speak; her tongue occasionally protruded between her teeth, and was bitten. Her mental faculties did not seem disturbed, but any noise or sudden touch would bring on a convulsion, her features expressing intense pain and anguish. The wound on her toe was a punctured one, about the middle of the inner side; it was completely healed up, and a little dark spot indicated the point of entrance of the fork. Her temperature on admission was 98°; pulse 96. The treatment at first adopted was an ice-bag to the spine, and Calabar bean in the form of one grain of the watery extract administered every three hours. At 12 P.M. the convulsions became worse, and it was resolved to push the drug. Between 12 P.M. and 1 A.M. Aug. 25th eight grains of watery extract were given, the patient being able to swallow fairly well, and between 1 A.M. and 3.40 A.M. ten grains more, without producing any of the toxic effects of the drug, and, as far as could be seen, without relief to the patient. The drug was finally abandoned at this time, as her power of swallowing had become much impaired. From this time up till her death, five hours later, chloroform was the only medicine employed. As the disease progressed its inhalation afforded great relief, the poor girl frequently crying out for it when she felt the commencing spasm. Several times a fatal termination was warded off in this way, and I felt the pulse revive and saw the lividity pass away as she came under the influence of the drug. To obtain this beneficial effect it was never necessary to push the chloroform to complete anæsthesia; as soon

as the vapour of the drug began to be fairly inhaled the breathing became free, and all spasm relaxed with great rapidity. Her temperature rose on the evening of her admission to 102°, and remained above 101° till the time of her death. She finally died from exhaustion, her pulse gradually failing.

At the *autopsy*, thirty hours after, the brain and membranes were congested, but there was nothing noticeably abnormal about the cerebrum or cerebellum. The spinal cord and membranes were congested, the substance of the former swollen and much softened in its upper portion, its structure being quite broken down in the middle of the cervical region. The left ventricle of the heart was not contracted. The other viscera were normal. Nothing abnormal was discovered in dissecting the region of the wound in the toe.

CASE 2.—Louisa P——, aged nineteen, a somewhat spare but healthy-looking young woman, was admitted on Oct. 21st. She said that two days previously she went to a hospital where she had a small tumour removed from her left forearm; she felt quite well up to the evening of the next day, when on eating a piece of cake her jaws became suddenly fixed. Since then she had been able to take but little nourishment, and the spasm in her jaws had been getting worse. On the morning of the 21st her neck began to get stiff, and she had some convulsions of brief duration affecting her limbs generally, and also some slight difficulty in swallowing.

On admission her jaws were firmly closed by muscular spasm, that relaxed somewhat at times, allowing a gag to be introduced. There was no retraction of the head or bending of the spine, nor were any of the limbs affected, but she complained of great stiffness at the back of the neck, and the muscles in this region felt hard and contracted. There were two small sores on the left forearm; one about the size of a hazel-nut, with a slight area of inflammatory induration surrounding it, and surmounted by a scab, was situated over the course of the ulnar nerve in the upper third of the forearm. This was freely incised. She swallowed with some difficulty, and at first the watery extract of Calabar bean was given in two-grain doses, but it was difficult to administer, and a little later on excited vomiting, so that hypodermic injection was resorted to alone. At 11.30 P.M. her temperature was 98·6°; pulse 104; she had some slight spasms in her limbs during the evening. At 1.45 A.M. on Oct. 22nd she was breathing quietly, but complained of a great deal of pain, and was perspiring profusely about the face and neck. Her pulse was more frequent, 102; temperature normal. An icebag was applied to the back of the neck, as it afforded at first some relief, but it was afterwards discontinued, the patient objecting to it. During the morning of the 22nd the active principle of Calabar bean, physostigmine and eserine, were given hypodermically, gradually increasing the doses; but none of the toxic effects of the drug were produced, and it seemed to have very little effect on the patient. At 4 P.M. she had a strong paroxysm of tonic spasm in her limbs, and was suffering so greatly that chloroform was administered with immediate relief, and from that time until shortly before her death she was constantly crying out for it. During the evening curare was pushed up to three grains and a half hypodermically with no appreciable effect. At 10 P.M. it was noted that she had had more frequent recurrences of the spasms in her limbs; her pupils were somewhat contracted; pulse fairly good, 120; temperature 101°. As yet there had been no lividity of the lips or symptoms of spasm in her respiratory muscles, while chloroform always gave rapid relief. At 4.40 A.M. on Oct. 23rd she had some strong tonic convulsions, and her respiration became greatly affected. When I came to her, her lips were quite livid, her chest and abdomen fixed, and pulse almost imperceptible. I rapidly administered chloroform, and as she came under its influence I felt her pulse become stronger beneath the finger, while the natural colour returned to her lips. In a few minutes she was in a condition of comparative comfort. Her temperature had now risen to 102·5°. An hour and a half later she died, almost suddenly, according to the report of the nurse.

The *autopsy* showed great venous congestion of the spinal cord. All the other viscera were healthy; the left ventricle was firmly contracted. It was afterwards ascertained that no tumour had been removed from the forearm; only a small abscess opened in this region.

Subjoined is a record of the amount of physostigmine and curare administered hypodermically, showing also the interval between each successive dose:

October	22nd	9.30	A.M.	1/8 gr. of	physostigmine
,,	,,	12	,,	1/8 gr. of	,,
,,	,,	2.45	P.M.	1/8 gr. of	,,
,,	,,	3.40	,,	1/8 gr. of	,,
,,	,,	3.45	,,	1/8 gr. of	eserine
,,	,,	5	,,	1/8 gr. of	curare
,,	,,	7	,,	1/2 gr. of	,,
,,	,,	9	,,	1 gr. of	,,
,,	23rd	1	A.M.	1½ gr. of	,,
,,	,,	1.20	,,	2 gr. of	,,

CASE 3.—Rachel R——, aged ten years, a healthy-looking child, was brought into the receiving-room on Jan. 13th, 1879, by her mother, who stated that her daughter had just been knocked down by a tram-car, and had fallen under the horses' feet, but she thought her more frightened than hurt. The child walked into the hospital; her pulse was good, and she complained of nothing; but on undressing her a very severe lacerated wound was found at the lower part of the abdomen, extending over the right groin and down the thigh. The wound was very deep and extensive, and in some places the muscles of the abdominal wall were exposed and lacerated. The child was taken into the hospital and treated on ordinary surgical principles.

During the next week everything went well; many sloughs separated, and healthy granulations began to appear; the child's general health also seemed very fair.

On Jan. 21st I was called to the child at 12 P.M., owing to a sudden difficulty in swallowing noticed by the nurse. On giving her drink it was constantly regurgitated. This I ascertained to be the fact on going to the bedside. The child also pointed to the left side of her neck and complained of pain in that region; on attempting to open her mouth her jaws became quite fixed, and she intimated she was unable to do so. She, however, succeeded a few minutes after this, and endeavoured to put out her tongue; when she had partially protruded it, another spasm closed the teeth on the tongue, and had a spatula not been promptly placed between the teeth it might have been severely bitten. The child was in a very restless state, but there were no noticeable spasms of other groups of muscles; her breathing was fairly easy, pulse good. One quarter of a grain of morphia was given hypodermically. At 9 A.M., Jan. 22nd, there was still difficulty in swallowing, but not so great as on the preceding night. Another symptom, however, had appeared. Several attacks of transient dyspnœa had occurred, with undoubted laryngeal spasm, prolonged crowing inspirations, and on one occasion for a few seconds there was visible darkening of the lips; these attacks did not last long. On auscultating the chest, moist sounds and a few wheezing rhonchi were heard. The spasm of the jaws was about the same; no other muscles had become affected. At 10.30 A.M. chloral hydrate, in ten-grain doses every three hours, was ordered. At 2 P.M. she had been able to swallow only one dose of her medicine, and scarcely any food could be taken. Her jaws were very rigid. No more laryngeal spasms had been noticed, but she made a peculiar hoarse noise with her breathing as if there were something at the back of her throat; there was also slight rigidity of the spine. The wound looked healthy, but her general condition was worse. There were evident symptoms of exhaustion, as was shown by restlessness and weakening of the pulse. At 11.30 P.M. she was evidently sinking, her pulse failing. No marked spasms had occurred since the last note. She was lying in bed scarcely conscious. On attempting to open her mouth she raised her arm feebly to prevent me; but there was no spasm now present, as the lower jaw could be readily depressed; neither was there any elsewhere. Her breathing was diaphragmatic, the chest moving but little, if at all, seeming quite paralysed; and the abdominal muscles were completely flaccid. She was quite unable to swallow, and died an hour later, without any convulsion. No autopsy was permitted.

Queen's-road, Dalston.

LEDWICH SCHOOL OF MEDICINE, DUBLIN.—The Board of Trinity College, Dublin, have placed this institution on the list of the Medical Schools recognised by Trinity College, on the understanding that three-fourths of each full course of lectures delivered must be attended by each University student, in order to obtain certificates of attendance.

CASE OF TYPHOID FEVER;

COMPLICATED WITH PAROTID BUBO OF THE LEFT SIDE, TERMINATING IN SUPPURATION, AND WITH SUB-MAXILLARY BUBO OF THE RIGHT SIDE, ENDING IN RESOLUTION.

BY A. McLACHLAN, M.D.

IT may be well to mention that there has been, during the past summer, a localised epidemic of typhoid fever, confined almost wholly to a section of the northern division of the town of Dumbarton. I have been almost always able to trace the route of contagion in these cases through the somewhat defective sanitary arrangements of the dwelling-houses. The kitchens of these houses are used in most cases not only for cooking, but form a considerable part of the sleeping accommodation. In these kitchens is situated a jaw-box, communicating, through a single syphon bend, almost directly with a large, not too well ventilated, common sewer. There is no water-supply in these houses, hence the jaw-boxes and pipes are seldom flushed. Thus a favourable passage is afforded for sewage and other gases, the result, it may be, of typhoid fæcal matter in a state of decomposition, into the most important part of their dwelling-houses.

Most of the cases I have visited have been of the bilious or mucous type. Two cases, where meningitis supervened, died. The following is the only case where the above-mentioned complications occurred. Speaking of the complication parotitis, Trousseau, in his "Clinical Medicine," says: "I regard parotitis as a very formidable complication; it is an affection from which I have never seen a dothinenteric or other fever patient recover." Murchison, in his treatise on the Continued Fevers, records six cases of parotid bubo. Of the six cases, five died.

John K——, aged seven years, resided with his parents in a house of two apartments, and with three occupants inclusive of the patient. The house was kept very clean, and the bedroom in which the boy slept well ventilated. On July 19th, 1879, I was called to see the boy, and learned that he had been ill for about one week. His illness began with no well-defined rigor, but had the appearance of a little poorliness, and was treated by his mother up to this date with some mild laxative medicine. On examination I found him complaining of headache. There was suffusion of the eyes. His skin was hot, dry, and unperspiring, with a temperature of 102° F.; pulse 120, regular, full, and compressible. Tongue moist, and covered with a slightly whitish fur on the dorsum, reddened at the tip and along the edge. Bowels had acted; urine high-coloured, non-albuminous. He was kept in bed and isolated as much as the circumstances of the case would admit from the other members of the family. A purely milk diet was ordered. The head was occasionally moistened with cloths slightly saturated with cold water, and an anti-febrifuge mixture, consisting of small doses of antimonial wine and solution of acetate of ammonia, was given. His body was sponged occasionally during the day with tepid water and vinegar.

From this date to July 28th, 1879, no untoward symptom occurred in the course of the fever to give rise to any alarm or uncommon uneasiness, excepting that the temperature had, without any manifest or well-marked cause, risen from 102° to 103°; but this morning there had been a sudden subsidence of the temperature from the 103° of the previous day to 100°. Still the pulse was 120, regular, small, and perceptibly much weaker, and the parotid region was swollen a good deal, and manifestly tender. The tongue was dry. He had passed a restless night, and could not swallow so well.

July 29th.—Face more swollen. Temperature 104° F.; pulse 130. Tongue very dry, glazed, protruded with difficulty. Ordered quinine mixture, two ounces of brandy in the twenty-four hours, beef-tea, milk and white of egg *ad lib.*; also hot bran poultices to be applied over the parotid region, and to be frequently changed.

July 30th to Aug. 1st.—There seems very little, if any, amelioration of the condition of the patient. Face much more swollen. Epithelium of tongue, and inside of part of the mouth necrosed. A gangrenous patch about the size of a shilling has manifested itself on the skin immediately below the right angle of the mouth. The right submaxillary gland is enlarged and tender. He has had occasionally slight attacks of delirium. Urine has been passed, and bowels have acted involuntarily. Continue same treatment, and add aromatic spirit of ammonia to the chinchona mixture in full and frequently repeated doses, also seven minims of tincture of opium every three hours till quieted.

Aug. 3rd.—Face still more swollen. Eye thoroughly closed up; features almost obliterated. Mouth gaping widely open; chin, submaxillary and parotid regions almost in one continuous plane with the top of the sternum. Pulse very quick, small, and fluttering. Fluctuation can be made out pretty deeply down in the parotid region. An incision into it gives exit at once to about six ounces of sanious pus.—Evening: Patient very much better. Pus getting exit freely. Temperature 99·1°; pulse 120, small, regular. Has slept a good deal.

5th.—Patient much improved. Swelling of face and neck almost gone. Still a considerable quantity of sero-sanious pus coming from the wound. Temperature 99·1°; pulse 108, much improved. Tongue very much cleaner. Patches of dead mucous membrane inside of mouth getting less. Gangrenous patch on skin healing up. Swallows well. Sleeping fairly. Bowels acted; urine normal.

7th.—Patient still improving. Temperature 99·1°; pulse 100. Bowels regular and stools of little consistence; urine normal. The tonsils, soft palate, and uvula covered with considerable patches of the oidium albicans. Ordered the throat to be painted with a solution containing biborate of soda, carbolic acid, and glycerine; and to continue quinine tonic.

9th.—Temperature 98·8°; pulse 96. Throat completely better; wound in cheek almost healed. Appetite good; bowels regular; urine normal. Patient may now be said to be convalescent.

In this case one or two peculiarities present themselves—namely, the sudden subsidence of the temperature from 103° to 100° F. coincident with the first appearance of the parotitis, then its rise and increase to 104° during the maturation of the abscess, and its sudden subsidence again on the exit of the pus. Another peculiarity is that, out of the nine families attacked, only one individual exhibited the complication. It further points out the benefits often to be derived from a tonic and stimulating treatment, during the course of what at one time seemed an almost hopeless case.

Dumbarton, N.B.

INTUSSUSCEPTION OF THE ILEUM WITHIN THE COLON.

BY CHARLES SLESSER, M.D.

THINKING that the few notes following may be of interest as those of a case illustrating in some degree the wonders which nature will sometimes work out when not interfered with, I venture to submit them for publication.

On the evening of July 5th, 1878, I was called in to see Lily M——, a rather slight, though previously healthy, child of seven months. She had shown signs of severe abdominal pain in the morning, followed by a motion, partly natural, but with a little blood at the last. This was attended by no relief to the pain, and in the evening there was passed another motion consisting entirely of blood. Slight oozing of blood continued till my arrival, when I found it staining the parts about the anus, which showed no hardness, nor mark of injury. The child was crying incessantly, and kept its knees drawn tightly up to the abdomen.

Next day the extreme pain had subsided, but there was some hardness at the lower part of the body, and tenderness on pressure. An attempt to use a soothing enema failed, as the fluid came back at once.

Up to July 9th there appeared a slight discharge of reddish-coloured fluid, getting gradually darker and more offensive. On the 9th there was found protruding from the anus a dark-grey membrane covered by very offensive fæcal matter. While being washed, it slipped up into the bowel, and though there were frequent fluid motions during the next two days, it did not again make its appearance till the 12th, when it was found hanging from the anus. On being cleansed it was seen to be of a dull, ashy-grey colour; it

was wrapped up in warm cotton-wool, and supported by a napkin. During this day the child seemed to suffer great pain, and there was frequent vomiting and purging. Next morning the piece of intestine was found detached; it consisted of the cæcum, with its vermiform appendix, and the ends of the small intestine and ascending colon. The child was now much easier, and had been so during the night, probably from the effect of an opiate; and by next day there was less vomiting, the motions were yellowish and less offensive, and there was neither swelling of abdomen nor tenderness.

From the 15th to the 31st July there were passed three or four loose motions per day as a rule, and in several of these were found what seemed like small shreds of muscular tissue. On July 31st, after severe purging and straining, there was marked prolapse of the anus. This recurred more or less severely on Aug. 13th and 21st, and on the 1st, 10th, and 24th of September. After this time the prolapse ceased, not reappearing even during the rather violent spasms of whooping-cough from which the unfortunate child suffered a few weeks after. In the meanwhile the evacuations had been gradually becoming more natural, and now, when a year and four months have passed since the commencement of her illness, the child has been making fair progress in growth, and though pale and slight, has a pretty good appetite, and the motions are generally natural in appearance, though there is for the most part an interval of two or three days between each.

Here, then, we have had intussusception of the cæcum within the colon, and the constriction had been so great as to cause mortification of the invaginated portion, and at the same time to afford facility to perfect union taking place between the two adjacent portions of living intestine, thereby maintaining open the intestinal canal and effecting a complete recovery.

The principal medicine employed was compound ipecacuanha powder in minute doses, to relieve pain and keep the bowels quiet; afterwards bismuth in tragacanth mixture, for the diarrhœa; and a mild preparation of iron when the bowels had returned into a comparatively natural condition.

Bramley, Leeds.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

METROPOLITAN SICK ASYLUM, FULHAM.

TWO CASES OF MALFORMATION OF THE HEART.

(Under the care of Mr. M. D. MAKUNA.)

CASE 1. *Deficiency of septum ventriculorum; foramen ovale patent; obliteration of the pulmonary artery.*—James P——, aged twelve years, unvaccinated, was admitted on the 7th of August last, suffering from variola discreta. He was delicate-looking, with an anxious face of a pale dusky hue; the eyelids were large and prominent; temperature 99·4°; pulse very feeble, irregular, jerky, about 120; respiration hurried; heart-sounds indistinguishable.

The father stated that the boy was prematurely born, about the commencement of the eighth month. He was a very backward child. He commenced to talk when he was about two years old, and to walk when he was between six and seven. He was of average intelligence; he always got out of breath when he exerted himself to do anything, and turned cyanotic; for the last twelve months he was subject to fainting fits.

The eruption of small-pox was very sparsely scattered on the body, and progressed tardily. The contents of the pustules were puro-sanguinolent. He did well till the 14th of August, when his temperature rose to 103·2°, and he was seized with an attack of pleurisy of the left side, which exhausted him considerably. He died on August 22nd, exactly twelve years and a fortnight old.

Necropsy.—Lungs congested, pleuritic adhesions on the left side; kidneys and liver congested; spleen soft, enlarged, and sago-pointed. The heart weighed eight ounces and a half, and measured eight inches and three-quarters round the auriculo-ventricular furrow and twelve inches round the longitudinal furrows. The thickness of the walls of the left ventricle varied from nine to six lines from the apex upwards, and of the right ventricle from seven to five lines. The septum ventriculorum was deficient, the space being intersected by columnæ carneæ. The uppermost opening was grooved out in the shape of a triangular tunnel; its base was directed upwards, and measured seven lines, its height six lines. When looked at through the right ventricle the course of the channel was directed obliquely upwards into the aortic opening. The pulmonary artery was completely obliterated. The circulation had probably been carried on through the ductus arteriosus serving as a branch of the aorta. The capacity of the left ventricle was about half of that of the right, which was normal; while that of the auricles was reversed. The foramen ovale was patent, the opening being at the back part, in the shape of a fissure about four lines in length and one in width. The mitral valves were thickened, rough, and with vegetative growths on them. Of the three right auriculo-ventricular valves one was rudimentary, another was about double the size of the third. They were covered with warty growths. The aorta was thickened, and its calibre was seven lines in diameter just above the sinuses of Valsalva.

CASE 2. *Patency of foramen ovale.*—James E——, aged six years and nine months, was admitted on March 31st, 1878. History of heart disease, cough, dyspnœa, and livid hue of the surface of the body during the periods of exacerbations. The health was below average; stupor, dyspnœa, palpitation, fingers clubbed, lips dusky blue, restlessness, moist mucous sounds heard all over the chest, expiration prolonged; heard-sounds indistinct and muffled by a double bruit; eruption discrete; pulse quick and frequent.

April 1st.—No sleep; cough; bowels opened; face swollen and of a very dusky hue, spots dusky, petechiæ, conjunctival ecchymosis, oozing of blood from the mouth and eyes, epistaxis; respiration hurried; pulse quick, 124.

2nd.—Pulse very small, weak, 128; respiration deep and slow; bowels opened during the night; urine clear, and passed in bed; sordes on the lips; heart and lung sounds much the same; extremities cold.

3rd.—Very low, comatose, nostrils widely dilated, gasping for breath, eyes semi-closed. Breathed his last at 12.10 P.M., the fourth day of the eruption.

Necropsy.—Organs intensely congested and soft; liver enlarged; muscular structure of the heart soft, and of a dusky red hue; auricles enlarged; foramen ovale patent, the aperture being large enough to allow a threepenny-piece to pass through.

GENERAL HOSPITAL, NOTTINGHAM.

(Cases under the care of Mr. LITTLEWOOD.)

FOR the following interesting notes we are indebted to Mr. A. R. Anderson and Mr. W. J. Cant.

GENU VALGUM; EXTRA-ARTICULAR OSTEOTOMY.

Mary C——, aged fourteen, was admitted on Sept. 27th, 1878. She was the subject of genu valgum, which had commenced in early childhood. The deformity affected chiefly the right knee, the angle formed being so considerable that she was unable to walk with comfort for more than a few minutes. The left knee was very slightly affected, and had not given her trouble.

On Nov. 7th Mr. Littlewood performed osteotomy. A transverse incision an inch long was made immediately above the prominent internal condyle, and carried down to the bone. A narrow chisel was then introduced into the wound, and the condyle divided through the greater part of its thickness, the section being carried nearly into the joint. The limb then readily came into good position on being forcibly bent inwards; the condyle at the same time was heard and felt to give. A splint was applied on the outer side of the limb, from the foot to the trochanter major. The operation and subsequent dressings were conducted antiseptically.

13th.—The wound was dressed for the first time. There was a purulent discharge, which had not escaped freely, and a good deal of tenderness around the part. A small drainage-tube was put in. The temperature, which was 103° the previous night, fell to 99° in the morning.

On the 15th the wound was re-dressed, and was looking quiet, with the discharge escaping freely. Temperature was normal in the morning, 100° at night.

On the 22nd the wound was healing. The discharge was very slight, but purulent. The temperature was now normal, both night and morning. The limb was in excellent position. The splint was still applied.

From this date the healing process went on uninterruptedly but slowly, the discharge lessened gradually, and the temperature kept normal. On December 13th it was quite healed, and careful movement of the knee was now commenced.

On Jan. 1st she was discharged with an almost perfectly straight leg, and a freely movable knee-joint. She could walk long distances without discomfort.

MORBUS COXÆ; EXCISION AND SUBSEQUENT AMPUTATION.

A. H——, aged five, in September, 1877, fell from a sofa on to his right hip, after which he was unable to walk, an extensive bruise coming on a few days afterwards. He was put to bed, and remained there till Dec. 1877, when he was admitted into the hospital, having all the signs of hip disease. He had a marked strumous aspect, as had the rest of the family. A weight and pulley were applied to the leg, and tincture of iodine was painted over the hip for two months, at the end of which a fulness was perceived at the outer side of the joint; this gradually increased so as to form a fluctuating swelling, the contents of which, consisting of curdy pus, were removed by the aspirator in June, 1878. He was made an out-patient two months afterwards, but the abscess gradually re-collected, and was again emptied by the aspirator, and again some six months afterwards, when an open sinus remained discharging pus freely. He was readmitted Oct. 24th. He was rapidly losing flesh, and the sinus was pouring out large quantities of pus. On Oct. 28th excision of the hip was performed; the whole of the head of the femur was removed and part of trochanter major. The acetabulum was rough to the touch. The wound was dressed according to Lister's method, and an L-shaped splint was applied.

For fourteen days everything went on well, when he had a sudden rise in temperature, the discharge becoming profuse and fetid. On March 11th a large quantity of dead bone was removed with the forceps and gouge. The discharge did not diminish, well-marked hectic supervened, and, as the boy became more and more feeble, amputation at the hip-joint was decided upon as being the only means of saving the boy's life. The operation was performed according to the method described by Mr. Jordan in THE LANCET.[1] An incision being made along the outer side of the hip to the middle of the thigh, the bone was turned out, and the leg removed by a circular sweep through the middle of the thigh. An Esmarch's bandage was previously applied, and only a few drachms of blood were lost. Catgut ligatures, horse-hair drain and sutures, were applied, with gauze dressings. The wound was dressed every other day, and there was a small quantity of purulent discharge. The patient rapidly improved in health; anterior part of stump healed by first intention. The drain and sutures were removed about fourteen days after, when two or three small sinuses remained on the outer side of the wound.

CYSTIC BRONCHOCELE CURED BY DRAINAGE.

W. H——, aged twenty, healthy-looking, was admitted on Nov. 16th, 1878, with a large, irregularly quadrangular-shaped cyst on the right side of neck, tense and fluctuating to the touch, and moving during deglutition. There was also a small cyst in front, below the cricoid cartilage. The large cyst had been tapped twice, tincture of iodine being injected the first time; the cavity after each tapping rapidly filled, and became extremely tense.

On Dec. 19th about six ounces of dark-red-coloured fluid were removed by means of trocar and cannula, a twist of carbolised catgut was introduced deeply into the cavity, and moderate pressure applied by means of sponge and bandage, with antiseptic gauze dressings. There was free sero-sanguineous discharge from wound, which was dressed every other day. A small amount of pus came from the wound, which gradually increased; when on Jan. 1st his temperature rose to 102·4° in the evening, the pus being thick and free. In the night œdema glottidis came on, relieved by passing a finger down the throat.

[1] Vol. i., 1879, p. 405.

The tissues around and over the tumour became very much thickened and infiltrated with plastic matter. A drain-tube was put in the wound, the catgut having become absorbed. The pus gradually diminished, the surfaces of the cavity uniting, and on March 16th only a small granulation was seen. The small cyst in front was treated in a similar manner, and gradually contracted like the larger one, nothing being left but indurated tissue, no more fluid forming.

ROYAL SURREY COUNTY HOSPITAL.

A CASE OF HYDATID TUMOUR OF THE LIVER, TREATED FOR RADICAL CURE.

(Under the care of Mr. H. PARSON.)

HENRY N——, aged fourteen, was admitted Oct. 30th, 1878, for a painful swelling in epigastric region. On Nov. 1st the swelling was aspirated, and found to be hydatid. Two ounces of fluid were drawn off, when the tube of aspirator burst. On the 17th it was aspirated again, and eleven ounces were drawn off; the needle became obstructed by membranes. On Dec. 3rd he was discharged, to be re-admitted on Feb. 6th.

He was tapped with trocar and cannula the day after his readmission, and the cannula was left in. On Feb. 17th a larger cannula was introduced. The opening was enlarged from time to time by the introduction of catheters. Very little fluid escaped until the size of a No. 12 catheter was reached, owing to the large size and number of cysts; and even then the fluid did not escape freely until a kind of pump was devised. Hooked wires of various forms failing to bring away the membranes, a brush, such as is used to clean tobacco-pipes, was employed. The bristles were cut short, and trimmed to the size of the tube, and the brush was then passed down until it extended beyond the internal end of tube. Whenever the tube became choked by membranes the brush was withdrawn and reintroduced, thus acting as a pump. The pumping was performed frequently during the day, and the tumour soon contracted and emptied itself, so that water returned as soon as injected.

On May 13th he was discharged. There was still a large surface of dulness over the liver, leading to the suspicion that there might be another tumour, but no bulging could be detected. Some weeks after his discharge the boy had an irritable cough, and the mother stated that he had brought up about a pint of stuff looking like "pure matter," and was much better after it. She was told to bring the boy to the hospital, and to save the excreta, if anything of the kind occurred again. Some weeks afterwards she brought the boy, and about ten ounces of a dark liver-coloured fluid, which, on examination, was found to contain large membranes, liver-substance, and muscular fibre. The lad was taken into the hospital for a few days, but he did not show the slightest symptom of distress, and said he had not felt better for months. Finding no recurrence, he was discharged, and has not been heard of since.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Extra-pericardial Aneurism, with Hæmorrhage into Pericardium.—Emphysematous Cyst of Lung.—Supposed Rupture of Roots of Brachial Plexus.—Rupture of the Heart.—Ainhum.—Peculiar Skin Disease.—Congenital Sarcoma of Brain and Optic Nerve.—Ovarian Cyst repeatedly Ruptured.—Intracapsular Fracture of Neck of Femur.

THE ordinary meeting of the Society was held on the 16th inst., Mr. Hutchinson, President, in the chair. A great variety of specimens were exhibited. Messrs. Lediard and Walsham were nominated auditors.

Dr. EWART showed a specimen of Extra-pericardial Aneurism of the Aorta, associated with Hæmorrhage into the Pericardium, without any discoverable communication between the two sacs. The case was that of a house-painter,

thirty-three years of age, the subject of chronic renal disease. He had suffered from rheumatic fever in September, 1878, and six months later he began to have œdema of the lower extremities, and subsequently, until his death some months later, progressive œdema of the face and upper limbs, with much dyspnœa. There were no signs of aneurism, but a double bruit was audible in precordial region. A large aneurism of the first part of the aorta was discovered after death; it communicated with the vessel by an orifice one-sixth of an inch in diameter, and was lined by fibrin, but filled with soft clot, mostly loose. The pericardial sac contained a large amount of fluid blood, and, as no orifice could be found communicating with the pericardium, Dr. Ewart suggested that the hæmorrhagic effusion occurred at the end of life, from the heightened blood-tension in the aneurismal sac causing transudation through its walls, double pleural effusion increasing the pressure around the aneurism.—Dr. MOORE asked if there was any evidence of pericarditis, citing a case he had just examined where slight pericarditis, secondary to renal disease, was accompanied by much hæmorrhagic effusion.—Dr. EWART, in reply, said there was no trace of pericarditis.

Dr. BARLOW showed a specimen of Emphysematous Cyst in the Lung of an infant three months old. During life the heart was noticed to beat to the right of the sternum, and the shape of the chest being normal, and the liver and spleen not transposed, the case was regarded as one of displacement from atelectasis of the right lung. After death the heart was found to the right of the middle line, the greater part of the space exposed on left side being filled by the upper lobe of the left lung in a highly emphysematous state, and connected with this lobe was a smoothly-lined cyst the size of a chesnut, not communicating with bronchi, but apparently a greatly enlarged emphysematous bulla. The rest of both lungs was more or less atelectatic. The heart's apex was bifid, the conus arteriosus large, and the ductus arteriosus patent. Dr. Barlow had not seen, nor found described in text-books, any precisely similar condition in the emphysema of adults.

The PRESIDENT brought forward a case of Supposed Rupture of the Roots of the Brachial Plexus. The patient was a young man with complete motor and sensory paralysis of the right upper limb, with the exception of the scapular muscles and one half of the pectoral, pointing to lesion of the four lowermost roots of the plexus. This view was further strengthened by the fact of the pupil on the injured side being more sluggish than its fellow, and incapable of dilating beyond a certain point, the eyeball on that side being also distinctly retracted into the orbit, and the palpebral fissure smaller than on the other side. These ocular phenomena pointed to lesion of the cervical sympathetic in the region supposed to be injured. As regards the brachial nerves, the roots must be entirely severed to account for the extreme and persistent paralysis. The hand was livid, cold, and slightly swollen, and the radial pulse was markedly small, almost imperceptible—a condition presumably secondary to the paralysis. The man, eight months ago, fell from ship-rigging a distance of thirty feet, was stunned by the fall, and on recovering himself found his arm to be as paralysed as it has since remained. Seen by a surgeon six weeks later, his arm was said to have been "put back in its place," but beyond this there was no evidence of dislocation, which, moreover, could not have produced such persistent paralysis. Mr. Hutchinson showed a photograph of a man who, after a fall from a height, suffered from almost precisely similar symptoms. Several cases of paralysis due to injury of the brachial plexus had been recorded, the earliest English case being one related by Sir James Paget. He had found records of only one post-mortem of such a case, and that a French case, where absolute paralysis followed on forcible reduction of a dislocated shoulder. The man died, and the four lower roots of the brachial plexus were found to be torn across. It appeared that the upper root invariably escapes, and therefore it is probable that the fibres of this root are less exposed to stretching in such injuries.—Dr. MOORE mentioned a case of paralysis due to pressure on nerves. A man was admitted into hospital with some paralysis of the left hand of obscure nature; the palsy extended to the arm, and then to the opposite arm. Next he became paraplegic, and finally died from palsy of respiratory muscles. After death a limited cancerous growth, giving rise to no external swelling, was found in the glands of both sides of the neck, involving the brachial plexus, and thence extending to the spinal cord.—Mr. GODLEE, in examining Mr. Hutchinson's case, thought there was evidence that some of the fibres at least of the posterior cord of the plexus were uninjured, for sensation was present in the region supplied by the circumflex nerve, and neither the deltoid nor serratus appeared to be wholly paralysed. He presumed that the ocular condition did not necessitate the absolute rupture of the whole of the plexus for its explanation.—The PRESIDENT said that the ocular paralysis was incomplete, for its nerve-supply mainly came from a part lower down than that supposed to be injured.

Dr. PEACOCK exhibited a specimen of Rupture of the Heart, sent by Mr. T. Fisher, of Great Eccleston, Garstang, Lancashire. The subject was an athletic man twenty-five years of age, a powerful wrestler, who was struck in the epigastrium in a brawl following a drinking bout. He fell down insensible, was kicked as he lay on the ground, and died in a few minutes. He had sustained a contused wound in the right temporal region, rupture of the eyeball, and fracture of the skull, but the immediate cause of death was a rupture of the wall of the right ventricle, three inches and a half in length, a large quantity of loose clot filling the pericardial sac. The heart weighed 10½ oz., and its walls were in places advanced in fatty degeneration. Dr. Peacock referred to a case he brought forward at one of the early meetings of the Society where the intraventricular septum was ruptured.

Mr. HULKE exhibited two specimens illustrating the disease known in Brazil under the name of Ainhum. The specimens had been sent by Dr. da Silva Lima, of Bahia, who first described the condition, and were forwarded to Mr. Hulke by Mr. Thomas Hall. They consisted of the outer portion of each foot of a tall corpulent African negro, aged eighty, who died on May 1st, 1879, of heart disease. He had suffered from ainhum in both little toes—first in the right, then in the left—for many years. From one specimen, the right, the toe was absent, having been previously amputated when about to fall off. The left little toe was still attached by a thin pedicle. In his note on the case Dr. da Silva Lima states that this was the only specimen he had obtained showing the toe still united to the foot; and he also adds that at Bahia and Rio Janeiro there have been a few instances of ainhum attacking the fourth toe, but it had never been seen in the three first toes or fingers. Mr. Hulke said that an account of the condition would be found in the Society's Transactions, vol. xviii. p. 277, and vol. xix. p. 445, the latter containing a report on its histology by Mr. Wood and the late Mr. De Morgan. The toe, at first large and bulbous, becomes constricted, the constriction deepens, the phalanx atrophying, until finally the toe drops off. It was to Dr. da Silva Lima that the Society had been first indebted for specimens of this disease.—The PRESIDENT returned the thanks of the Society to Dr. da Silva Lima for having sent the specimens.—In reply to Dr. Powell, Mr. HULKE said that the nature of the disease, so far as was made out in the report referred to, was a wasting of the normal tissues and bones due to a gradual growth of dense fibrous tissue.

The PRESIDENT brought forward two examples of Peculiar Skin Disease—both in young boys, and both of the same nature—unique in his experience. The cases had been under observation for two years, and during that time showed hardly any change. The condition consisted in groups of wart-like patches, which on close examination were seen to be composed of congeries of minute cysts, some of which contained blood. The contents of the cysts were albuminous and corpuscular. In one case such a patch occurred on the chin, and a portion of this patch had been excised and examined microscopically by Dr. Sangster. In this case the disease had existed for five years, and had been but little affected by treatment. In the other, a group of the patches occurred on the shoulder, suggestive of irritation from the brace worn by the boy. They might be due to dilated lymph-vessels, and if so, he would suggest, under correction, the term "lymph-warts" as descriptive of the condition. He referred to a case brought forward by Dr. Tilbury Fox last year, where a vesicular eruption, also thought to be lymphatic, occurred on the thigh in association with a nævus.

Dr. SANGSTER showed microscopical specimens from Mr.

Hutchinson's case. He had found no change in the mucous layer of the epidermis, but some hypertrophy of the Malpighian layer. The sheaths of the hair-follicles were irregularly developed and dilated. In the corium were large superficial lacunar spaces, mostly elongated, and disposed vertically. Some of these spaces were empty, others filled wholly or partially with amorphous granular material, and occasionally mingled with blood-corpuscles. The cavities had mostly ragged walls in the midst of loose fibro-cellular tissue. In some specimens he had found acari folliculorum in the mouths of the follicles.—The PRESIDENT added that he showed one of these cases to Dr. Tilbury Fox, who agreed with him that the condition was not the same as that in his (Dr. Fox's) case.—Dr. THOMAS FOX, referring to this case, mentioned that the vesicles did not appear till six months after birth, and that they then increase *pari passu* with the growth of the nævus. He considered that the vesicular changes then present were identical with those of Mr. Hutchinson's cases, the microscopical characters being also similar, and that both were examples of lymphatic disease.—Dr. HOGGAN, on the other hand, thought that whereas Dr. Fox's case was connected with lymphatics, the present were not, and he suggested that in the latter the condition was due to obstruction of the sebaceous gland-ducts.—Dr. THIN thought Mr. Hutchinson's cases unique. The disease was too localised to have a constitutional origin, and was also free from any ulceration. He thought the presence of the acari might throw light on them, seeing what extensive destructive changes had been found in the skin of the dog affected with these parasites by Dr. Sparks, in a paper read at the Medico-Chirurgical Society some years ago. He could not agree to the "lymphatic" view, seeing how difficult it was to demonstrate the lymphatics of the skin. A more likely explanation was that the cavities in the corium were produced by exudation from bloodvessels, causing a disruption of tissue.—The PRESIDENT hoped they would be able to examine the other case microscopically.—Dr. SANGSTER could not admit that the condition was precisely similar to that in Dr. Fox's case, which was further complicated with nævoid growth. There was no evidence of any connexion with sebaceous glands. He agreed with Dr. Thin, that the changes were those of fluid accumulation causing rupture of tissue; and, in the light of Dr. Sparks' observations, thought it possible that the acari might be proved to be not so harmless as generally held.

Dr. BRAILEY showed a specimen of a Tumour implicating the anterior lobe of the Brain and the Optic Nerve—from an infant, three months of age, under the care of Mr. Joyce, of Cranbrook. When born the right eye was slightly protruded, and the upper lid a little congested. A tumour above the orbit gradually increased; the child became much emaciated, but death took place without there having been any special cerebral symptoms. The right anterior cerebral lobe was found involved in a mass of new growth, which had invaded the orbit, causing absorption of its roof, and had protruded over the face. The eye was not invaded by the growth, which presented a reticulated stroma enclosing epithelioid cells. Dr. Brailey considered it an alveolar sarcoma, closely simulating carcinomatous structure. It was interesting in that it clearly arose during intra-uterine life.—The PRESIDENT also thought it an alveolar sarcoma, from its close resemblance to a growth of like kind he had met with in the subcutaneous tissue.—Mr. GODLEE said that in one form of these alveolar sarcomata a criterion for discrimination between them and carcinoma lay in the existence of minute stroma between individual cells. A specimen he had described some years ago showed this. That also was from the skin.—Dr. THIN suggested the use of eosin as enabling observers to differentiate between cells of connective tissue and those of epithelial origin.

Mr. MEREDITH exhibited an Ovarian Cyst, which had repeatedly ruptured for nine years before removal. It was removed by Mr. K. Thornton from a single woman forty-seven years of age. She first noticed enlargement of the abdomen ten years ago, and, in 1871, tapping was practised. The cyst filled up in four months, and then suddenly, after some pain, the swelling disappeared; and at the same time, for some four or five days, she had copious diuresis. This refilling and rupture, with diuresis, took place about three or four times annually, until April, 1879, when it was again tapped by Mr. Edwards, of Ipswich. Since April it had twice refilled, and twice ruptured. At the end of September she came to the Samaritan Hospital, but, the cyst being then collapsed, two months were allowed to elapse. The cyst filled up again, and ovariotomy was performed on Dec. 4th by Mr. Thornton. The cyst contained twenty-one pints of fluid. It was a unilocular true ovarian cyst, with walls very ill-supplied with vessels, and the interior showed much atheromatous change, and numerous points of ulceration extending through to the outermost layers. It was to this that the repeated spontaneous rupture was due, the cyst-wall yielding at one of these points whenever the tension in the cyst became greatly heightened. The apertures must have closed up rapidly on each occasion. It was also interesting as regards the frequency of the rupture and the amount of fluid absorbed by the peritoneum.

Mr. H. MORRIS showed a recent specimen of Intra-capsular Fracture of the Neck of the Femur in an old man. The case was of interest clinically owing to the difficulty in determining whether the hip was dislocated, a difficulty enhanced by the fact (discovered after death) that there was a bony mass growing out of the posterior border of the great trochanter, which during life gave rise to the appearance of the head of the bone on the dorsum ilii.

The PRESIDENT then read over the list of specimens shown by card; and Mr. MORRANT BAKER drew attention to the two specimens thus shown of Dislocation of the Head of Femur on to the dorsum ilii in hip disease, by Dr. Lediard. Mr. Baker said that he had upon a previous occasion demurred to the statement that such dislocation was at all frequent—i. e., in the early stages of the disease. The specimens shown by Dr. Lediard were in advanced cases, and the condition they exhibited was not as complete a dorsal dislocation as is said to occur.

Specimens, &c., without oral communication.

1. Drawings from cases of Cancer of the Breast. By Mr. Hulke.
2. Specimens and drawings of two cases of Osteitis in connexion with Inherited Syphilis. By Mr. Hutchinson.
3. Complete Occlusion of the Right Division of the Pulmonary Artery, the result of disease; Atheroma of Pulmonary Artery. By Dr. Ewart.
4. Broad Fibro-Cretaceous Ring surrounding the Heart in the situation of the Auriculo-Ventricular Sulcus. By Dr. Ewart.
5. Dislocation of Hip-joint from Disease (two specimens). By Dr. Lediard.
6. Kidneys united by a Fibrous Band. By Dr. Lediard.

THE HEALTH OF SAN FRANCISCO.

THE medical officer of health for the city and county of San Francisco, Dr. J. L. Meares, gives the annual rate of mortality for his district (estimated population 305,000) during the year ending June 30th, 1879, at 14·75 per 1000 (the lowest rate of mortality yet recorded in the district), as against 16·39 in the preceding year. The annual rate of mortality in the Registrar-General's standard group of rural districts in this country is 16·50 per 1000. So low a mortality in a city and district such as that of San Francisco may well excite surprise. The city still retains abundant evidence of that utter neglect of sanitary considerations which accompanied its foundation and development, and among its population there are some sections, notably the Chinese, who live under conditions in which the most rudimentary requirements of health appear to be ignored. Recently the health authorities have made most strenuous efforts to enforce some sort of sanitary regulation in the city, and, in certain respects, it would appear not unsuccessfully. But Dr. Meares' report does not lack illustrations of the great amount of work which has yet to be done before San Francisco can be reckoned among localities which may claim a respectable position as clean and wholesomely conditioned places of the earth. Have we here, in this low mortality of San Francisco, a sort of criterion of the important part which time has played, as well as sanitary negligence, in the development of the unhealthiness of the cities of the old world, and of districts which have been longer occupied?

THE LANCET.

LONDON: SATURDAY, DECEMBER 20, 1879.

AFTER a careful consideration of Mr. LISTER'S lecture, which we publish in our present issue, it appears to us that the term "Listerian" must in future be largely employed to express our meaning when referring to the treatment inculcated by Mr. LISTER; because, as Mr. BRYANT and other surgeons argue, they unquestionably practise antiseptic surgery, their efforts being directed to keeping wounds clean and free from decomposing matter. No doubt chloride of zinc, carbolic acid, tincture of iodine, and even the open system of dressing wounds, combined with cleanliness are antiseptic measures, when directed towards the prevention of surgical fever from the absorption into the blood of putrefying organic substances. Nevertheless, Mr. LISTER would repudiate the notion that this practice in any way fulfils his ideas as to what antiseptic surgery should be. And, consequently, it becomes important when referring to cases to describe them as being treated according to the Listerian method when the details of practice taught by that surgeon are strictly carried out, otherwise much confusion will inevitably result.

A considerable amount of accurate research must yet be gone through before Mr. LISTER'S germ theory can be proved to be correct, or be disproved; but it is with the results of his practice we are mainly concerned, and we doubt if figures will aid us much in coming to a conclusion on the subject. We believe that if Mr. LISTER'S system possesses the advantages claimed for it, it is merely a question of time as to when it will take its place as the established practice of surgeons, and this time will neither be hastened nor delayed by statistics such as those which have at present been presented to the profession. We admit without hesitation that the result of Mr. SAVORY'S and of Mr. BRYANT'S hospital practice is most satisfactory, but we are equally sure that patients under certain very unfavourable hygienic conditions have been enormously benefited by the employment of the Listerian system of dressing. The testimony of British surgeons, not only in this country, but in India and other parts of the world, together with the evidence of practitioners engaged in some of the Continental hospitals, is conclusive on this point; in fact, the Listerian system may be said to be the outcome of defective sanitation, for Mr. LISTER evolved his principles and practice of surgery in the wards of the Glasgow Infirmary, at a time when the insalubrity of that institution was notorious.

It is now an established principle that septo-pyæmia is caused by the absorption of decomposing organic matter into the blood from open wounds. At the time of making an incision, or dressing a wound, air necessarily passes into the surrounding vessels and connective-tissue spaces, inducing decomposition in the organic matter they contain. This and other putrefying matter taken into the blood is the cause of septo-pyæmia. Evidently, therefore, the chances of blood-poisoning are somewhat in proportion to the rapidity with which, after an injury, decomposition takes place in the tissues, because the structures surrounding a recent wound have not had sufficient time for the living matter they contain to become organised, and so to some extent to form a barrier to the absorption of the products of the wound into the circulation.

The task Mr. LISTER set himself was to prevent the formation, and so to overcome the dangers arising from the absorption, of these decomposing substances into the blood. As we have before remarked, there is no necessity for us to enter upon a discussion of the theory upon which Mr. LISTER has been working. The principles which he has gradually unfolded have now become familiar to all, and, like most other problems, when once solved the difficulties that had to be overcome appear extremely small; for, as Mr. LISTER has demonstrated, all we have to do is to charge the atmosphere surrounding a wound, or during an operation, with moist air containing carbolic acid. Under these circumstances when the surgeon makes an incision into the soft tissues, or dresses an open wound, this atmosphere, containing a material which prevents decomposition, is sucked into the vessels and other open spaces in the tissues, and if the part is then covered with some substance saturated with an antiseptic composition which mixes with the air passing into the injured tissues, the discharges in and about the wound will remain pure—that is, undecomposed. The cause of septo-pyæmia being thus avoided, patients so treated will, as a rule, be preserved from the dangers of blood-poisoning, which, although it does not always kill the patient, may nevertheless lead to long and dangerous illness, and leave its mark on his system, lasting for years, or perhaps for life.

So long as we can remember, surgeons of eminence have (not unfrequently in the pages of this journal) urged upon the profession modifications in the dressing of wounds, which, in their opinion, seemed superior to anything existing at the time. We have seen too many of these plans fail to be disposed to take up any novel system of treatment without due consideration; this, however, was by no means the only reason which made us hold back from expressing an opinion favourable to Mr. LISTER'S teaching, for it has long been evident that this was not merely a matter of treating surgical wounds, but that principles of great importance were involved. If Mr. LISTER'S premisses and practice be correct, their recognition will sweep away not a few of the landmarks which have guided surgeons up to the present time in the practice of their profession. Listerism, if accepted, must bring with it reforms in several branches of surgery; prior, therefore, to giving our assent to principles of this kind, we were bound to satisfy ourselves by unprejudiced and satisfactory evidence as to the efficacy of Mr. LISTER'S system, not only with regard to the death-rate, but as to the general results obtainable under his treatment. Our inquiries have turned in this direction rather than to a comparison between the mortality after operations performed under LISTER'S system and that under any other mode of dressing, because it is not simply a death-rate under various plans of treatment we have to consider, but if Listerism in the smallest degree guards our patients from

any preventable dangers after injuries or operations, duty clearly points out the road we should follow.

After the most careful consideration of the subject, we believe Listerism has undoubtedly diminished the mortality and the danger to patients situated under unfavourable hygienic conditions, after surgical operations; and holding this belief, we may argue from the greater to the less, and assert our conviction that this same system is capable of preventing septo-pyæmia in patients under almost all circumstances. We hold therefore that Listerism is destined to be the surgery of the future; for, however difficult the details or length of time required to carry out these principles in individual cases, it must and will prevail, because it guards our patients from unquestionable dangers.

THE advocates of animal vaccination may well pray to be saved from their friends. The practice needs no bolstering up by unsound argument. It can afford to stand on its own merits, and these are such as must ensure success within practicable limits. It is difficult to understand what could have induced Dr. CAMERON, M.P., to import into the discussion of the subject certain exploded fallacies as to vaccination, and to develop them in a fashion which can hardly fail to discredit the whole movement.

Dr. CAMERON, in letters to *The Times*, suggests that the increased prevalence of small-pox in this country since the Vaccination Act of 1867 came into operation is owing to two principal causes—namely, a deterioration of efficacy in the humanised lymph used; and the undesigned, but actual, adoption in numerous instances for purposes of vaccination, of a lymph which is not vaccine lymph at all, but true small-pox virus. To the combined operation of these causes—the production of a state of things analogous to that which existed when inoculation of small-pox was the rule in this country, and the gradual diminution of protective power in our real safeguard against the disease by means of arm-to-arm vaccination—Dr. CAMERON would assign the exceptional small-pox epidemic of 1870-73, and subsequent undue prevalence of the malady. Even if the argument had been sound, it would have been superfluous in respect to the true merits of animal vaccination; but it would be difficult to conceive one more fallacious. It has again and again been shown that such general deterioration of humanised lymph as Dr. CAMERON refers to has not occurred. That vaccine lymph may and does deteriorate in certain circumstances is an unquestioned fact, and the vaccinator has no more important duty to perform, and one requiring more skill, than the prevention of such deterioration by the proper selection of his lymph. But as humanised lymph is in this respect in no worse a position as to deterioration than animal lymph, this aspect of the question would be out of place in Dr. CAMERON'S argument. Of the general question as to the deterioration of humanised lymph, it is not necessary to do more than repeat Professor WARLOMONT'S remarks on the subject at the Conference on the 4th inst., and refer to Dr. STEVENS'S observations. "It has been said," Professor WARLOMONT remarked, "that lymph degenerates by passing through the human organism; so that what was introduced by JENNER has now lost a part of its power. This is only a simple assertion, and its truth has not been proved. It is perhaps some merit of me to acknowledge it; but I myself, rashly I fear, but honestly, brought forward this idea some years ago. At the present time nothing proves to me that lymph can degenerate." Dr. STEVENS stated that his experience, probably unique, in the inspection of vaccinated arms in this country fully confirms Dr. WARLOMONT'S statement that the asserted degeneration of humanised lymph is unproven. He further showed that the assumed degeneration was inconsistent with the absolute protection secured by revaccination to our nurses in the metropolitan small-pox hospitals, during the recent exceptional prevalence and malignity of the disease, and with recent returns of mortality from small-pox published by the Registrar-General. These returns, which refer to the epidemic of 1876-78 in London, show a vastly lessened mortality in the last year of the three among children between one and five years of age—the age at which it was to be anticipated the effects of our present arrangements as to public vaccination would begin to be most manifest. The death-rate in each of the three years respectively was 17·0, 17·2, and 1·6.

Dr. CAMERON'S suggestion that a quantity of lymph is in use in this country for purposes of vaccination which is in reality true small-pox virus, and which, when inoculated, may give rise, by infection, to small-pox in its worst form, even if in the inoculated subject its effects are indistinguishable from those of ordinary vaccination, is too extravagant for serious discussion. He has disinterred certain inferences to this effect of CHAUVEAU and others from a series of futile experiments as to the variolisation of cows, of which it would be hard to say whether their fallaciousness or insufficiency in regard to the question at issue was most conspicuous. We are, in effect, asked by Dr. CAMERON to believe that English observers for thirty years have foregone all their judgment, and been living in a fool's paradise, believing that they had obtained cow-pox by variolisation of the cow, and that this cow-pox yielded, when used in vaccination, solely the phenomena of cow-pox! The observations of SEATON, MARSON, CEELY, and a host of other skilled observers here and on the Continent, are to be held of absolutely no account in this matter, and even the familiar phenomena from which we are accustomed to derive our evidence of the spread of small-pox are to be ignored!

This strange revival of CHAUVEAU'S fallacy is all the more inexplicable, inasmuch as, even if there were any real foundation for it, it would not explain the recent increased prevalence of small-pox in this country. The history of that prevalence forms one of the most instructive episodes in epidemiology, and proves that its origin must be sought in other conditions than those suggested by Dr. CAMERON.

The increase in England was not an isolated phenomenon. It was common to this country and to both hemispheres, and was first noted in France. There, about the beginning of the Franco-German war, small-pox broke out among a practically unvaccinated population in Brittany, with a malignancy and diffusiveness probably not seen before in the present century. While this outbreak was in progress, it became necessary, for the purposes of the war, to drain the district of its youths. These were sent to different military stations and drafted at once into regiments in active service, without the preliminary vaccination or revaccination

adopted in more peaceful times. The conscripts introduced the disease into the several corps to which they were attached, and so infected the army generally with the malignant malady prevalent in Brittany. Wherever the army went the disease went, and in this manner the malady was introduced into Paris and carried by prisoners into Germany. After the fall of Paris, the non-residents, who had been shut up there during the siege, helped in the dissemination, and in the train of some of them this exceptional form of small-pox was brought to England. It was introduced into London when an ordinary outbreak of small-pox, depending upon the accumulation of unvaccinated children, was in progress, and the imported disease rapidly supplanted the ordinary malady. Meanwhile the spread of this malignant affection had not been limited to the countries adjoining France, but had passed on from country to country until it had involved the greater part of the globe. The disastrous influence of this outbreak was marked in its exceptional malignancy and diffusiveness, and the change it effected in the character of small-pox in the several countries invaded has not yet disappeared. Never before had vaccination been exposed to so severe a strain; but the weaknesses disclosed in the English system were those of imperfection, not of degeneration. And even with these manifest imperfections (now amended), England proved to have by very far the best vaccinated population of those countries with which comparison was possible. Professor WARLOMONT might well caution us against tampering with our present system of arm-to-arm vaccination, even while seeking to make animal vaccination auxiliary to it. But to teach the people generally, as Dr. CAMERON now seeks to do, that our present system, by the degeneracy of the vaccine lymph and the variolous nature of much of it, multiplies the evil it is designed to abate, no efficient substitute, generally available, being at hand, is to prejudice not only our chief safeguard against small-pox, but also our compulsory vaccination altogether.

As with the broad field of scientific inquiry which comprehends organic life in its normal developments, and in orderly action, so with the science of disease in its pathological and clinical aspects, the opportunity that exists is greater than the use made of it. This must always be the fact; but more than is now practicable might be accomplished if some way could be devised for utilising the vast amount of labour available, in precisely the sort of work required—namely, the collection of *facts*. Morbid histology and abnormal function are abundantly illustrated in the practice of every hospital, and rich examples of disease in its mutual relations of cause and effect fall under the observation of every practitioner; but no records are kept, or, if there be, the varying standpoints from which men regard the objects within their ken, and the different views and aptitudes for special work they bring to bear upon the materials around them, deprive the results of their investigations of scientific value. If some experienced, sound, and practical pathologist could draw up a simple and precise code of instructions for observers, which should provide a standard of normal appearances and characteristics, with some common measure for the estimation of the abnormal, and if the profession would accept a uniform method of recording clinical experiences, the way would be opened for real progress.

The hypothetical conditions we have laid down are confessedly difficult to satisfy; but an attempt would not be hopeless, because it is clearly possible to come to a better understanding as to clinical and pathological work than has yet been established. The energy put forth in the service of medical science during the last twenty years has accomplished great results, but these are not as yet widely disseminated. It is, perhaps, unreasonable to expect practitioners, educated before the many modern methods and appliances of inquiry were discovered, to devote the scant leisure of busy lives to the study of these new ways in medicine. It is to the younger men, who are presumably trained in the use of scientific implements and processes, we must look for the pioneer work of the future; but even these investigators do not agree among themselves as to what they seek to accomplish, and how the ends in view are to be reached. This is a most important circumstance, and suggests a few words of counsel in view of the new year of opportunity on which we shall shortly be entering.

The fewer the points of difference between labours which ought to be correlated, the better will be the general result. It would therefore be well if, while the habit of recording every observation is duly cultivated, attention could be directed on the simplest lines, and investigations pursued with familiar appliances, to perfect the knowledge already acquired, and to enlarge the field of inquiry by cautious rather than ambitious explorations. At the bedside and in the post-mortem room science needs the verification of data and the consolidation of results. The demand for a better acquaintance with the "known" is fully as necessary as the acquisition of new facts. Everyone can help in this department, and no aid will be more serviceable than that rendered by the practical men who have been engaged in the study of disease during a lengthened period. Youth and new methods may be requisite for progress, but age and experience are the indispensable conditions of such work as consists in the closer study of familiar facts.

It may be doubted whether clinical *observation* has not lost something of its old precision in recent times. Improved tools do not necessarily produce better work. However this may be, there is ample opportunity and a great necessity for the help of practised clinical observers, and we commend to their consideration some of those enigmas of medicine which have formed the subject of special critical inquiry and controversy during the year now closing: for example, croup and diphtheria; the spread of hydrophobia; vaccination; septicæmia and blood-poisoning, with the measures for the prevention of these evils; the use and abuse of the forceps in midwifery; and a score of other "burning questions" of the remedial art. But in an especial manner would we urge an earnest endeavour to concentrate and focus the light already existing in relation to maladies of the more common sort, with respect to which the profession is daily and hourly taxed to the fullest extent of its resources in the struggle with disease. It cannot be doubted that there is still much to learn in connexion with the diagnosis and treatment of simple illnesses, and particularly the diseases of children, which, as we have recently tried to show, have been strangely overlooked of late.

The simpler the methods of investigation employed for recording purposes the better, and the more concisely the story of any case can be told the greater will be its value to the majority of readers. The men who derive the largest practical advantage from the systematic perusal of clinical and pathological reports are those who have the least leisure for reading. This should be borne in mind by those who desire to confer a substantial obligation on the profession, and to aid the enterprise of health-preservation and the cure of disease, by the publication of their experiences. There is no more useful and generous discharge of professional duty than the record of *facts*. The task of drawing inferences should be considered as something wholly apart from narrating observations, and in a large class of instances it may well be left to other hands. The practitioner who simply places on record what he *observes* at the bedside, or at a post-mortem inquiry—sometimes in the same case, at others without any such connexion—is doing good service; and, we repeat, the simpler and more concise the records of his observations, the greater will be their value to the men he seeks to help.

Annotations.

"Ne quid nimis."

ANATOMY AND PHYSIOLOGY AT THE ROYAL COLLEGE OF SURGEONS.

THE election of the Board of Examiners in Anatomy and Physiology of the Royal College of Surgeons, which we briefly announced last week, was the first under the newly-recognised principle of separating Anatomy and Physiology in the primary examinations for the membership and fellowship. Mr. John Wood, of King's College, Mr. Heath, of University College, Mr. Arthur Durham, of Guy's, Mr. Pick, of St. George's, and Mr. Rivington, of the London Hospital, were elected Examiners in Anatomy; and Mr. Power, of St. Bartholomew's, Mr. Hulke, of Middlesex Hospital, Mr. Baker, of St. Bartholomew's, and Mr. B. T. Lowne, of Middlesex School, were elected Examiners in Physiology. It will be noticed that while the five examiners in Anatomy are attached to five different schools, two schools supply all four examiners in Physiology. This is, to say the least, curious. A little more variety would, perhaps, have been more welcome. At all events, the members of the Council might, without seriously impairing the efficiency of the Board of Examiners, have followed more consistently their peculiar proposition, to which they assented last week, that a person is not fit to examine in anatomy and physiology unless he be likewise competent in surgery, surgical pathology, and operative surgery. When Mr. Gay, at the very meeting of the Council at which the Board of Examiners was elected, moved that the Examinerships in Anatomy and Physiology should no longer be restricted to the Fellows of the College, but thrown open to Members and Fellows alike, he was gravely told that it would be very improper to elect on the Board of Examiners in Anatomy and Physiology a member of the College who, after officiating at the primary examination for the fellowship might himself be rejected in Surgery or Surgical Pathology at the final examination for the fellowship. And yet of the three candidates for the contested seat on the Board of Examiners the Council elected the only gentleman who is not a practising surgeon. The argument brought forward to defeat Mr. Gay's motion was, indeed, about as ridiculous as it would have been if the University of London had refused to appoint, say, Professor Ellis examiner in Anatomy on the ground that he might possibly be rejected in Midwifery in the second M.B. examination. If this be the gravest objection to making Members of the College eligible for examinations in Anatomy and Physiology, the rule that restricts the examinership to Fellows is assuredly doomed. Time alone is needed for its abolition.

THE UNIVERSITY OF LONDON.

IN view of the coming election of a Fellow of the University, a circular, signed by several graduates in Arts and Medicine, and sent to the members of Convocation, has been placed in our hands. This circular professes to set forth the "special claims and qualifications" of Mr. William Shaen, M.A., for the fellowship, and invites the assistance of the members of Convocation to place him at the head of the senatorial list. The "special claims and qualifications" referred to can hardly be that Mr. Shaen "is a member of the Society for the Extension of University Teaching, and of the committee of the Legal Education Society, a vice-president of the Education Society, and a member of the governing bodies of Manchester New College, University Hall, and Bedford College"; for no one, or even all these, would, we imagine, be seriously set up as constituting a special claim, or even a general qualification, for a seat in the Senate of the University of London. We take it that the paragraph—of which the words quoted form a part—is simply ornamental.

The only other facts contained in the circular which can be construed into a special claim are the following:—That Mr. Shaen was for ten years an active member of the original Graduates' Committee; that he was for the first ten years of its existence clerk to Convocation; that since his retirement from the last post he has been continuously a member of the Annual Committee; and, finally, that his "increasing labours during the last thirty years have contributed in no small degree to the acquisition for Convocation of such an amount of influence and consideration as it already possesses." We have no sufficient data to test the accuracy of the last statement, but were it strictly correct it is somewhat surprising that there is anything left of Mr. Shaen to be nominated for the Senate.

These statements are somewhat bare, and require explanation, in order to estimate them at their proper value.

In the first place, Mr. Shaen was an active member of the original Committee of Graduates; he also acted for some time as its secretary. The first general meeting of graduates from which the original committee was constituted was arranged by Dr. Barnes, who acted for some time as sole secretary, and then for several years as medical secretary, in conjunction with the late Dr. Charles J. Foster, who was afterwards chairman of Convocation. These gentlemen continued to act as joint honorary secretaries, and Mr. Shaen was associated with them on the condition of a salary being paid him. It was in this way that Mr. Shaen joined the Graduates' Committee some little time after the movement was fairly started. When Convocation was formed, Mr. Shaen became clerk to it, and received a similar remuneration for his services. As clerk to Convocation, Mr. Shaen undoubtedly rendered great services to the University, for he brought to bear on his duties methodical and business habits, together with legal knowledge; but the fact that he was paid, however inadequately, removes all claim on this ground for a seat on the Senate. It would be a sad day for the University were the holding the office of clerk to Convocation for a longer or shorter period made a claim for the fellowship of the University.

A laborious connexion of thirty years, a considerable part of it being as a paid officer, does not constitute a special

claim even by reason of the knowledge thus acquired for the honour sought, for the working of the University is known to most of those who have served on the Annual Committee, as well as its traditions (if a body not fifty years old can be said to possess such). The fellowship should be reserved for those who have acquired distinction not only in the University but outside it, and who hold broad and liberal views on the subjects likely to come before the Senate, and especially on scientific and general education. There are several such graduates, and Mr. Shaen may be one of them; but the circular sent to the members of Convocation fails to show that Mr. Shaen has any special claims for the honour they seek for him. On the present occasion a graduate in Arts should be selected, and we feel sure that the medical graduates will gladly co-operate in the selection of such a candidate; but he should possess enlightened views on scientific subjects, such as are in harmony with sound academical teaching, and therefore with the fundamental principles and organisation of the University of London.

DR. ANDREW DUNCAN.

WE regret to learn that the wound received by Dr. Andrew Duncan has proved more serious than was at first anticipated. The bullet entered the back, glanced round the body, and was extracted from beneath the skin over the region of the liver. In fact, the wound was very similar to that received by the Duke of Edinburgh some few years ago, during his Australian trip, at the hands of a Fenian miscreant. Dr. Duncan progressed favourably for some few days, when pleurisy with effusion set in, and some degree of pneumonia of the right lung was also suspected. The last report of his condition is somewhat more cheering; still great anxiety attends his case, and will continue till all doubts respecting the exact nature of the mischief in the chest are at an end. The most hopeful view we can suggest is that the pleurisy may be due to exposure to cold in his present weak condition, and not directly to the injury. But whatever surmise we offer, we cannot disguise the fact that the case has assumed a very serious aspect.

MR. GLADSTONE AT GLASGOW UNIVERSITY.

THE political opponents of Mr. Gladstone will not withhold their admiration of the address delivered by him to the students, in his capacity as Rector of the University of Glasgow. Though at points there cropped up a sentence reminding one that the Rector was also the politician, the general conception of the address was large and the tone of it noble and lofty. When the address, both in its composition and in its delivery, is regarded as part of Mr. Gladstone's work in Scotland, extending over a fortnight, and involving exciting and exhausting conditions of all sorts, it must be viewed by us with a physiological interest as an intellectual and physical feat, apart from its intrinsic merits.

The Scotch universities may be congratulated on having found so powerful an exponent of their virtues and their advantages, as drawing to themselves men of all ranks and conditions in society, including—at least the Humanity class of Glasgow includes—joiners, miners, brassfounders, bootmakers, tailors, grocers, engineers, drapers, shipbuilders, stewards of steamers, a toll-keeper, a pocketbook-maker, a blacksmith, &c., in addition to those meant for the professions of divinity, law, and medicine. What struck Mr. Gladstone, and must strike every careful observer of the Scotch system, is the paucity of purposeless men in the universities. The students go with an object, and though there are worthless and idle students in Scotland as elsewhere, they go pretty directly to their purpose in the university, and thereafter in the world. The fact that Scotland, with her population of three and a half millions, has 5500 students in her four universities, is a proof that she estimates the teaching they have to give.

We cannot follow Mr. Gladstone, as we gladly would, through his address. His criticism of the times we live in as times of rapid progress, with the disadvantages of velocity; of vastly growing wealth, with the disadvantages and evils of such growth; and his estimate of the university as an Institution, in all times and in all places, meant to generate influences that shall qualify and abate the mere influences of wealth and the direct accompaniments of wealth; his peculiarly strong opinion of the value of the study of history and of the advantage of collateral pursuits, are points which we would like to have dwelt on, but they are a little beyond our possibilities of space.

Mr. Gladstone's estimate of the medical profession, and of the tendencies of medical study, is more especially of interest to us and our readers. After a high eulogy on the profession of the Bar, and the curriculum leading thereto, as giving a high mental training, he went on to speak of the medical profession offering, even to the uninstructed eye, "an object of still livelier interest." "Here, indeed, much is changing, but all in the direction of advance." It was impossible to doubt that the profession had learned much for the benefit of mankind, and was honestly and resolutely set on learning more. It had not only become more learned but more intelligible; and by becoming more the interpreter and assistant of nature, the medical attendant assumed a ground common to him and his patient, whose co-operation and obedience he the better secured. One effect of this advance in the learning and the usefulness of the profession of medicine was an improvement in its social status, so that equality with the other cultivated or leisured classes, which was only granted a century or two ago to the chiefs of the profession, and "that in only one of its branches," may now be said to be the enjoyment of its members generally, and as of right. More than all this, medicine comes to be important in view of the growing complexity of life, which seems to involve a growing complexity of disease, and of medical study. The enhancement of interaction between body and mind both enlarges and elevates the province of the medical man, brings him more and more into the inner sanctuary of our nature, quickens the search for expedients by which he may even "minister to a mind diseased," and gives to his art more and more frequently the character of a joint process operation on the seen and the unseen parts of our compound nature, promising to make medicine more and more "not an art only, but also a philosophy."

These are more than eloquent words. They are deep and thoughtful estimates of progress really made, or in process, in the medical profession, and of its rewards in the esteem of judges. And though we can scarcely allow Mr. Gladstone to be regarded himself as looking on medicine with an "uninstructed" eye, it is gratifying to have such a testimony from one whose point of view is not professional, but that of scholarship and philosophy. It were well for medicine if men of Mr. Gladstone's position, intellectual and social, would do medicine the justice more frequently to investigate its claims, if not yet as a philosophy, at least as an art; if they would spend part of a day now and again in making themselves still more minutely acquainted with some of the great mass of learning which is already accumulated under the name of medicine, and even with some of the details of disease and the methods for its detection and relief. Mr. Gladstone admits that the days in which medicine could be held up to ridicule and disparagement are gone, and that the demand for it lies deep, if not in the order of nature, yet in the actual constitution of things. He would do much to satisfy the profession if he would in "his place"—wherever that may be in the future—claim for

the profession and for its opinions that respect which his thoughtful words imply that he personally accords to it.

As for the rest of his address, we commend it to the consideration of all students, whether in the universities or outside of them, and in the hard ways of life. It contains momentous suggestions on themes of surpassing and eternal interest to men, even in faithless times like these, and it contains a solemn expression of the belief of one considerable man, "that human thought is not yet divorced either from the vital essence of Christianity or from the cardinal facts and truths which are to that essence as the body to the soul; and that when that divorce arrives, with it will come the commencement and the pledge of radical decay in the civilisation of the world."

THE MURCHISON MEMORIAL.

AT a meeting of the Extra-Academical Teachers, held at the Royal College of Surgeons, Edinburgh, on the 1st December, 1879, Dr. Keiller reported that he had received a communication from Dr. Greenfield, honorary secretary to the Murchison Memorial, intimating that "at a meeting of the general committee of this Memorial, on Friday, 14th November, the following resolution, moved by Dr. Richard Quain, and seconded by Dr. Spencer Cobbold, was unanimously adopted:—

"That the General Committee having heard the protest of the Edinburgh Extra-Academical Teachers, resolve to recommend that the competition in Edinburgh for the Murchison Memorial Scholarship be open to all students of the Edinburgh Medical Schools."

After remarks had been made by various speakers on the satisfactory nature of the communication, the following resolution was proposed by Dr. Muirhead, seconded by Dr. Handyside, and unanimously agreed to:—

"That Dr. Keiller be asked to convey to the General Committee of the Murchison Memorial the thanks of the lecturers in the Extra-Academical School of Medicine, for their frank and ready acknowledgment of the justice of the protest forwarded to them against the invidious exclusion of the students in this school from the competition for the Murchison Memorial Scholarship; and also for the prompt and unanimous acquiescence of the General Committee in the request of the lecturers to open the competition to *all* students in the Edinburgh Medical School, as had already been resolved upon in the case of the London Medical Schools."

It was also agreed, "That a copy of the resolution be forwarded to the leading medical journals for publication."

THE CABUL EXPEDITION.

OUR correspondent's letter by the last mail describes the troops of General Roberts's force as settling down into winter quarters at Shahpur, the old Afghan cantonment, situated two miles north-east of the city of Cabul. The barracks, built by Shere Ali, and so recently occupied by the Afghan soldiery, were found in an exceedingly filthy and dilapidated condition, minus windows and doors, the roofs and floors covered with excrement and filth of all kinds. The barrack-rooms are fifteen feet wide, with wide verandahs in front. Surgeon-Major Porter ordered the flooring to be taken up, the whole of the buildings cleaned, fumigated, and whitewashed, prior to occupation, doors, windows, and wood-work being brought from the dismantled Bala Hissar to render them habitable. The hospital was taken in hand first; a small fort adjacent was told off as the hospital for the native troops, and by judicious management accommodation was provided for 300 sick. The native regiments are feeling the benefit of the "field hospital system." At the battle of Charasiah the native force were working under the regimental system, with a consequent lamentably deficient amount of transport. Their wounded would have been left behind but for timely succour willingly given by the British field hospitals. By their system the carriage placed at the disposal of the senior medical officer was available, and disposed as required, and, although the training of the dhoolie-bearers had been hasty, and their quality far from good, they worked with a will, and the wounded were removed with little delay to the dressing stations and hospitals. General Roberts inspected the hospitals, British and native, on the 22nd October, and expressed himself greatly pleased with the arrangements for the care and comfort of his sick and wounded soldiers. The general health of the force was very good, provisions were ample, fruit—grapes, apples, pears, figs, oranges, melons, &c.—being abundant. The water-supply is bad, the river source being polluted by villages up stream and irrigation channels. Dr. Porter had issued stringent orders for its purification by boiling and filtration. After the explosion in the Bala Hissar and its dismantlement, a considerable quantity of European medicines were discovered in one of the rooms; these were, of course, handed over to the field hospital. The severe fighting of the last few days will cause a heavy and unexpected strain on the medical staff at Dr. Porter's disposal, and we shall look with interest for particulars how it has been met.

"SISTERHOODS."

SINCE it became the fashion to hand over the nursing of hospitals to associations of ladies whose bond of union is something outside the institution which they are called upon to serve, we have frequently been edified by squabbles between the ladies and those to whom they should be subordinate. These ladies often enter upon their duties with the conviction that they are conferring a favour upon the hospital, and they imagine that the obligation is all on one side, notwithstanding that the sums paid by hospital committees to the various associations with which the ladies are connected, are in most cases greater than those previously paid to the ordinary nurses.

We cannot unreservedly subscribe to the popular belief that nursing (i.e., professional nursing) is an occupation which is at all suited to ladies who have been delicately brought up, and we feel sure that the lady who is ready to perform all those disagreeable duties which are necessary (let us say) for the prevention of bedsores must be a rarity, although we admit that such have been and are occasionally found. Such work is, we feel sure, better entrusted to strong, properly trained women of the lower class who have been accustomed to dirty work from their youth up, and who are never squeamish over their duties. That a governess should be looked down upon, while a lady-nurse is regarded as a heroine, is an anomaly due to a fashion which, like other fashions, will have its day. It is a notorious fact that nurses dislike working under sisterhoods, because promotion into the higher ranks of the profession thereby becomes impossible, and nurses of experience invariably cut themselves adrift for the purpose of gaining something like independence and advancement.

We have been prompted to these remarks because of the rumour that one of our oldest and richest hospitals is about to hand over its nursing to a Nursing Association. We feel sure that to do so will prove a great mistake. It is the establishment of an *imperium in imperio*, and at the very outset the inevitable grit has got into the machine, and bids fair to work incalculable damage. There can be no difficulty in the present day in finding a superintendent and a staff of nurses who shall be at once respectable and efficient, who will perform their duties, as such duties should be performed, solely as a matter of business, and who will owe allegiance to no one except to those hospital authorities whose duty it plainly is to maintain as absolute a control over their nursing as over their medical staff, and to see

that they properly carry out the instructions of the medical officers to whose direction their work must be subordinated.

THE EXECUTIVE COMMITTEE OF THE GENERAL MEDICAL COUNCIL.

WE do not gather that there was much important business before the Executive Committee at its recent meeting. The dispute between the Irish Branch Council and the General Council as to the course of procedure in regard to additional qualifications and alterations of address, occupies a considerable portion of the Minutes; the question being whether the Registrar of the Medical Council is entitled to make additions and corrections in the general Register before they have been made in the local Register in which the original registration took place. Our readers will have seen the somewhat novel and contradictory advertisements in our columns as to this question, and, though it is of little interest, it ought to be settled, as the issue of such advertisements is neither dignified nor satisfactory. In one case a name removed from the Irish Register has never been removed from the general Register. So much the worse for the Irish Register. Great differences of opinion exist between the Branch Councils and the General Council as to the expediency of the Corporations giving up their duties and rights of conducting the preliminary examinations of students, as has been long recommended by the General Council. The Registrar reports that he has addressed, in accordance with the request of the Committee, a letter to each of the licensing bodies with a view to ascertain the accordance between their regulations and the "recommendations of the General Medical Council." Three of the licensing bodies have not yet replied. The Registrar promises the Committee another edition of the Minutes when the returns are complete. It is very gratifying to notice a letter from the Colonial Office informing the Council that the proposed legislation in Canada for imposing a heavy fee on British practitioners for registration in the Province of Ontario is relinquished. The Committee was asked to receive a deputation from the holders of certain American dental doctorates who held themselves hardly used in being refused registration. But the Committee declined. The College of Surgeons of England has refused to accede to the request of the Council to make any alterations in its existing regulations of candidates for a dental qualification *sine curriculo*.

HUMAN ANATOMY AND THE NATURAL SCIENCE TRIPOS.

AFTER another discussion, a vote of the Senate of the University of Cambridge has definitely settled the question of the admissibility of Human Anatomy in the Natural Science Tripos. Questions will continue to be set in Human Anatomy as distinct from either Comparative Anatomy or Physiology; but in arranging the class lists the answers will be considered in connexion with one or other of those subjects. It will thus be seen that a compromise has been arrived at by which the study of human anatomy, without being entirely disregarded, is not to be so especially favoured as to be considered a distinct and separate science, like botany, chemistry, or physics. A student who takes up human anatomy must add another subject correlated thereto, such as comparative anatomy or physiology. It is difficult to see why physiology should be allowed to stand alone, but we suppose, inasmuch as there is no qualifying word before it, that candidates will be examined over its whole range, vegetable as well as animal. Unless this be clearly understood, human anatomists will have a fair ground of complaint in regard to the unequal position of the two branches of science. We are strongly of opinion that instead of trying to arrange the examination for the Tripos, so as to favour the medical students at Cambridge, by including therein subjects which they must necessarily pursue in their technical education, it would have been better, in the interests of science, if all the strictly professional subjects had been omitted. True scientific culture would obviously be greatly benefited by such a course; and if the medical school at Cambridge should then require artificial encouragement, a purely medical Tripos, as a substitute for the first M.B. examination, might be introduced. By the adoption of the present compromise a few more medical students may be attracted to the University, but it will not improve either the prestige of the B.A. degree or the educational advantages of a pure training in science "for its own sake." We look to the universities to leaven our profession with a certain proportion of men who have had a thoroughly scientific education. It is the scientific method, and the culture to be obtained therefrom, that are so valuable in training the mind, and these are immediately sacrificed when the student is encouraged to enter on a given subject because it will lighten the burden of his purely professional studies.

WOOL-SORTERS' DISEASE.

PUBLIC attention has again been called to the peculiar nature and rapid fatality of this affection by a leader and some correspondence in recent numbers of the *Bradford Observer*. A man, apparently in the prime of health and strength, who was engaged in sorting Van mohair at Shipley, complained several times to his wife of the noxious character of the wool with which he had to deal. He was taken suddenly ill, and in four days succumbed to what was considered a severe cold, attended with congestion of the lungs, but which, we suppose, must really have been an acute form of blood-poisoning. Such rapid cases are not unfamiliar to the medical men who practise in that district, and are found to occur only among the workers in alpaca, mohair, camels' hair, and dry Eastern wools, among which there may be some fallen fleeces. An admission that sorting these in their unpurified condition is a dangerous occupation is found in the fact that the employers of this man, whilst denying that his death was due to wool-sorters' disease, state that they are provided with proper apparatus for preventing any unpleasant consequences from sorting the class of wool referred to. They do not mention, however, that this particular specimen of mohair was subjected to any disinfecting process. Inasmuch as all noxious properties can be effectively destroyed by a sufficient exposure to dry heat or to steam, it would be more satisfactory if the proper disinfection of such wools were made compulsory. Greater attention should be paid to this source of peril than it has hitherto received. The exact nature of the wool-sorters' disease is still somewhat obscure, and it would be a great gain to our knowledge if its pathology were placed beyond doubt. It is very different from any of the forms of mechanical bronchitis which are so common in many trades. Its rapidity, and the post-mortem appearances of those who have died from it, are especially characteristic of a blood-poison. Dr. Bell, of Bradford, believes that it is produced by the inhalation of living organisms derived from the fleeces of animals that have died from anthrax. He states that it can be communicated from man to animals, and that myriads of bacteria (Bacillus anthracis) may be found in a drop of the blood when examined after death. Such a definite conclusion, and one so readily tested, is of the utmost importance, and we hope that Dr. Bell will take immediate steps to demonstrate so valuable a pathological discovery before some professional body, which is in a position to fully appreciate its merits. Why not bring the subject under the notice of the Pathological Society, and so secure a competent authority for its investigation?

OPERATING BY THE ELECTRIC LIGHT.

ON the 11th inst. Mr. Berkeley Hill operated for vesico-vaginal fistula in University College Hospital while the vagina was lighted up by Mr. Coxeter's application of the glowing platinum wire. The apparatus consisted of a fine wire twisted into a small knot. Through this knot was sent a continuous galvanic current, strong enough to maintain the wire at a white heat. The wire was enclosed in a glass chamber, which was itself also enclosed in another glass cover. Through the space between the glasses, a current of water was allowed to flow in order to preserve a low temperature round the light. The afternoon, which was dark and foggy, afforded a good opportunity of testing this plan of lighting up deep interiors, and the illumination was completely successful. A strong light was maintained for more than an hour, close to the margins of the fissure, without impeding the manipulations of the operator. A considerable number of spectators, among whom was Mr. Lund of Manchester, assembled to witness the result of the illumination, and were highly pleased.

MEDICAL STATEMENTS v. CERTIFICATES OF DEATH.

A CURIOUS inquest has been held at Plymouth, at which the coroner, Mr. Brian, thought fit to reflect on the medical man, in circumstances in which we think the medical man should have received the coroner's thanks. Mr. Henry Greenway, the medical officer of health for Plymouth, was called to see an old lady whom he had attended aforetime gratuitously in consideration of her humble means. Before he could arrive she died. He could not certify in a formal way to her death, but wrote a statement that she had long suffered from asthma and bronchitis. The registrar declined to accept the statement, and recommended the deceased's son to take it to the coroner, who took the occasion of it to hold an inquest, not to throw any light on the cause of death, but to reflect, as we have said, on Mr. Greenway. To do coroners justice, they do not generally so reward the kindness of medical men, who by such statements often save the public money and the feelings of friends. Mr. Greenway's kindness and right behaviour are the subject of very fit praise in a contemporary, the *Western Daily Mercury*. He needs no further vindication.

THE TEMPERATURE OF THE BODY DURING REST.

A NOTE upon this subject was recently communicated to the Académie des Sciences by M. Bonnal. The object was to compare the temperature of the human body during complete rest in bed, having regard to climate, season, time, abstinence, digestion, age, and sex. From the observations, more than a thousand in number, the following conclusions are drawn:—(1) The variations in the temperature of the outer air influence appreciably that of a subject placed in a room, although the temperature of the latter has not changed. The action of the atmosphere surrounding the body is limited to its surface. (2) In each season the minimum temperature of the body is observed between midnight and 3 A.M. At Nice, in winter, this minimum is rarely below 36·3° C. In autumn, at Paris and Milan, after the external temperature had been lowered to freezing point for several days, a minimum body temperature of 36·05° C. was registered. In summer (hot weather) the minimum temperature is usually from 36·4° to 36·5° C. The nocturnal fall does not occur so distinctly if, instead of being in bed, the subject is up, reading or writing. (3) From 3 A.M. the temperature rises steadily until 9 A.M., when it reaches 36·7° or 36·9° C. in winter, and 36·9° to 37·3° C. in summer. (4) At every season the maximum is reached, as a rule, between 2 and 4 P.M., but occasionally, in very hot weather, the maximum may be postponed until 8 or 9 o'clock. (5) In winter, from 9 A.M. to 9 P.M., the variations of temperature do not exceed ·3° or ·4° C., while in summer, during the same period, the extent of variation may amount to ·6° C. (6) At 9 P.M. the temperature is generally from 36·7° to 36·9° C. in winter, and 37° to 37·5° C. in summer. (7) From this time it gradually falls until the minimum is reached, but towards midnight the fall is commonly rapid, especially when the temperature of the outside air is low. (8) Sleeping or waking, abstinence or digestion, age and sex, make no difference to the course of the temperature, provided the body is maintained in complete repose. Thus five persons—three men and two women—aged from twelve to sixty-two years, having been kept in bed for several hours, and examined at the same hour of the night, presented a uniform rectal temperature. This observation, repeated several times at different periods, always gave the same result.

CYPRUS.

A MEDICAL correspondent, writing last week, informs us that the troops, consisting of the left wing 20th Regiment and a detachment of Royal Engineers, have vacated their summer quarters on Mount Troados, and are encamped for the winter months at Polymidia, a new site reported to be healthy, distant three miles from Limasol. During the last month of their stay in the mountains, fevers of a malarial nature had been prevalent, attributable in great measure to a very heavy rainfall. The cases were, however, not of a severe type, and no death occurred during the month of October. At Polymidia the men occupy tents; huts have been erected for the married families, and a stone building has been secured for the hospital. The winter climate of Cyprus is all that could be desired, while the occupation of hutting, road-making, and laying out the new cantonment, will keep the reduced garrison fully employed and consequently healthy.

EXTRICATION OF OXYGEN BY PLANTS IN SUNLIGHT.

IT is not easy to demonstrate that oxygen is given off by the green parts of living plants in sunlight without resorting to analysis. Hoppe Seyler has, however, suggested a ready means of proving it. He places a small fragment of the Elodea canadensis, or American canal weed, in a glass tube, and pours upon it water to which a drop or two of decomposing blood has been added. The tube is then hermetically sealed as close to the surface of the water as practicable. If now the tube be exposed to sunlight, and, after a little while, examined with a Browning's pocket spectroscope, the two strie of oxyhæmoglobin are visible; but these vanish in the course of a few minutes after the tube has been placed in the dark, owing to the consumption of the oxygen by the putrefying substances. The experiment may be repeated an indefinite number of times for a week at least.

HYDROPHOBIA.

THE Scotch papers report one of the cases of supposed hydrophobia which are from time to time placed on record, in which the symptoms developed long after a bite. The girl had been bitten eleven years ago by a bull-dog, respecting which no suspicion appears to have been entertained. The girl's symptoms were pain in the back and difficulty in swallowing, and she died after a few hours' illness. As the case is briefly reported in the papers, there seems strong ground for doubt regarding the nature of the disease. Pain in the back is not a usual symptom of hydrophobia, while the short duration of the illness renders the diagnosis still less probable.

MIDDLE-CLASS HOSPITALS.

WE are glad to learn that the difficulties thrown in the way of the Home Hospitals Association by the decision of the Master of the Rolls, which debarred them from making use of the house they had acquired in Portman-square for the purposes of the Association, are now being overcome. They have been able to secure an eligible freehold in Fitzroy-square, and will, no doubt, in time, get what they seek for, an equally eligible freehold in the west district. Meanwhile, Brokeley House, the building above referred to, will be sold without delay.

ON Tuesday last, the Princess Louise and Prince Leopold and suites paid a private visit to Westminster Hospital, with the special object of inspecting the work of the Kyrle Society in three of its wards. They were received by Sir Rutherford Alcock, Canon Prothero, Mr. Nattali (on behalf of the Kyrle Society), Mr. Cowell, Dr. Fincham, and Dr. Allchin, who conducted the Royal party through several of the wards. The Prince and Princess were greatly interested in many of the cases which were explained to them by the Staff.

WE are glad to find that the Court of Appeal has refused the application for a new trial in the cause of Phillips *v.* the South-Western Railway Company. There could not certainly be any reason to question the justice of the verdict returned on the second trial, and it is satisfactory to know that the decision cannot be upset on technical grounds.

THE microscopic specimens illustrating Dr. Greenfield's lectures, now in course of delivery at the University of London in connexion with the Brown Institution, will be shown on Tuesday next, from 5 to 7 P.M., in the reading room of the University.

THE new uniform for army medical officers, described in our columns last week, can, we understand, be seen at the establishment of Messrs. Phillips and Co., George-street, Hanover-square, who made the designs and patterns for the War Office.

WE regret to have to announce the death of Dr. Maclure (late lecturer on Physiology at the Westminster Hospital), which took place at his residence in Harley-street on Saturday last. The deceased gentleman had been ill only a few days.

THE DEBATE ON ANTISEPTIC SURGERY.

THE discussion upon Antiseptic Surgery at the Metropolitan Counties (South London District) Branch of the British Medical Association, which was adjourned on the 3rd inst., was concluded on Wednesday evening last at St. Thomas's Hospital; Mr. John Wood, F.R.S., President of the Branch, again filling the chair. Many excellent speeches were given, of which we give an outline below; and if any cases be singled out for especial notice, they would be those of Mr. Wood, Mr. Hutchinson, and Sir James Paget, all of whom, and especially the last-named, approached the question in a broad and genial spirit; dwelling especially on the fact of the other influences at work in modern surgical treatment than those of the special form of antiseptic surgery associated with Mr. Lister's name. Sir James Paget's survey of the progress made in the results of surgical operations, and the reasons for this progress, were thus of great value, for he spoke from a personal knowledge extending over a generation.

The CHAIRMAN opened the proceedings of the evening. After referring to the financial side of the question of adoption of Listerian measures, and to the strong wave of opinion in favour of such methods, he reminded the meeting of the remarkable results which Messrs. Callender and Savory had shown were attained in St. Bartholomew's Hospital under other plans of treatment. In reply to Mr. Holmes's appeal that he should furnish statistics of cases treated in his wards at King's College Hospital for comparison with those of his colleague, Mr. Lister, he declined to allow himself to be made an "awful example" of, and cited Mr. Holmes himself as to the uselessness of statistics without regard to the circumstances of the cases. Mr. Lister had stipulated for and obtained separate wards, house-surgeon, dressers, and nurses, whereas his (Mr. Wood's) wards communicated with those of one of his colleagues, and the nursing staff was common to them both. He had more than once had an invasion of erysipelas from the one ward into the other. He claimed that the simpler methods of wound-treatment were of advantage to the pupils, some of whom were intended for the army, and he had been assured that it was impossible to carry out the Listerian plan on a campaign. He could show good results, such as tapping joints, and injecting them with iodine. He also had had good results with the Listerian method—e. g., one case of removal of an enlarged thyroid. But he had seen disastrous results—cases of undoubted carbolic acid poisoning. It had been said that to carry out the Listerian system thoroughly required faith in the bacterial theory; but though he inculcated this, he always felt as if he were committing a pious fraud. It was like the old belief in the efficacy of the "sympathetic powder"—when the water dressing which was used at the same time was the real curative agent. He could not get over such difficulties in the theory as the escape of so many cases from ill-result where bacteria must be present, as fetidity of deep abscesses not communicating with the air, or the readiness with which wounds heal in the region of the mouth, &c. He concluded by a warm eulogy of Mr. Lister, whom he characterised as possessed of all the advantages which enabled him to enforce his principles.

Mr. HUTCHINSON then spoke. He avowed a firm belief in the value of *detailed* statistics. Preferring to speak of the "spray and gauze" plan rather than of the Listerian plan (for Mr. Lister's fame rested upon the general introduction of antiseptic surgery, and not upon any special method), he believed this to be an efficient and potent means of preventing putrefaction, and the causes of such specific inflammations as suppuration, phlebitis, &c. He had seen large abscesses opened under the spray cease from that moment to suppurate, and large operations performed without any sequential fever or discharge. He had not himself opened healthy joints, but he accepted the fact that measures could be resorted to under this method which, without it, it would be almost criminal to adopt. Reviewing the stages by which modern opinion had been arrived at, he especially mentioned Sir James Simpson as the first to strive zealously to diminish mortality after operations; and improvements in ligatures, the introduction of torsion and acupressure, all had this end in view; together with the isolation of contagious cases in hospitals. He referred also to Mr. Spencer Wells, who, as editor of the *Medical Times* twenty years ago, in which he (Mr. Hutchinson) assisted him, carried out the idea of collating facts of hospital operations with this same view of diminishing their mortality. Although Mr. Lister had developed the practice in detail, and kept close to the germ theory, yet it should not be forgotten that all the while measures of hospital reform and improved methods of treatment were tending to the same end. So, to a certain extent, all surgeons were in these days antiseptic; and it had been shown that equal success attended those who adopted the "spray and gauze" method, and those who did

not. He thought that there was an exaggerated impression abroad as to the noxious influence of the admission of common air to wounds; and he felt that in some cases the "spray and gauze" method did positive harm. At the same time, those who showed but a small percentage of mortality were those who were cautious in their treatment; and what was wanted was a comparison of mortality under different plans of treatment of each operation separately. This had been done for ovariotomy. For compound fractures and all accidental wounds he thought that other methods were better, but where the surgeon makes his own wounds antiseptic precautions must be taken, and it would be long before the "spray and gauze" system would be superseded.

Sir JAS. PAGET, who began by stating his intention to deal with the subject on broader grounds, admitted it as proved that the antiseptic system was potent to arrest the spread of infectious diseases, and consequently to diminish the mortality after operation, in the good it had wrought in this direction in continental hospitals. The same result had been attained in St. Bartholomew's Hospital, but by different means. He had not himself found much difference in mortality after operations between hospital practice and private practice. He then gave statistics of his practice in the thirty years (1847 to 1877) that he was on the staff of the hospital, and of his private practice for the last twenty years. Dividing this into three decennial periods, he found a mortality in the first period of not less than 15 per cent., in the next period 10 per cent., and of the third less than 5 per cent. (or less than 2 per cent. in private practice). Taking larger operations alone—amputations, excisions, &c.—the average mortality had fallen from 30 per cent. in the first period to 10 per cent. in the last. It was plain that the antiseptic treatment could not be credited with this reduction. It would show rather that even when the mortality was highest there remained 70 per cent. of the patients who were not susceptible to the fatal influences of these diseases, which the antiseptic method was framed to meet. For in these days, operation cases were all equally exposed to the same noxious influences. Many factors concurred in causing this diminution in mortality after operations. The practice of bleeding after (and even before) operations, active treatment of inflammations by leeching and purging, were abandoned. The sanitation of hospitals became recognised as essential. Skilled nursing, improved medical education, and a keen rivalry among surgeons to get the best results after operation, were all important in leading to these results. But statistics did not record the narrow escapes from dying that many patients had run. He believed that antiseptics diminished these risks; and since its introduction by Mr. de Morgan he had always used chloride of zinc as an antiseptic, with this end in view. He admitted, with Mr. Hutchinson, that such operations as ovariotomy, osteotomy, incisions into healthy joints, the opening of large abscesses, could and should only be done under the protection of thorough antiseptic measures. Of all the important additions to knowledge this has been the greatest, and in that work he who beyond all comparison has done most is Professor Lister, as much by the introduction of antiseptics as by provoking others to scrupulous care in the treatment of their cases.

Mr. LUND (of Manchester) was the next speaker. He avowed himself a thorough partisan of antiseptic surgery, and urged that its adoption should be carried out in all its details. He pointed out the differences between the conditions present in abscesses that had been opened by the knife and those obtaining after amputations, the wounds produced by the latter being less capable of protection than the former.

Dr. NEWMAN (of Stamford) also cited his experience, having diligently followed out Lister's method since 1871, both in hospital and private practice. He was convinced of the fact, not only that mortality was diminished by it, but that the duration of cases was lessened—quoting a striking example of two cases of compound fracture treated side by side, one on the antiseptic plan and the other not; the one was well in two months, the other left the hospital in six months with discharging sinuses and a crippled limb. The method also gave greater sense of security to the surgeon.

Mr. KNOWSLEY THORNTON believed that a very large proportion of deaths after ovariotomy was due to septic causes, and he would include in this category nearly every case of peritonitis and many of exhaustion after this operation. He contrasted the readiness with which wounds healed under the method, without any suppuration about ligatures, so common in the old days; and thought one great gain was that the surgeon was relieved from much anxiety.

Mr. MORRANT BAKER quoted his statistics of fifty-two major amputations, including three of hip and three of thigh, none of which (with one or two exceptions) were treated antiseptically. Only one died from any cause directly attributable to the operation, and not one from septic poisoning. There were five other deaths; two, within a few hours of operation, from other severe injuries, two from phthisis, and one from advanced renal disease. The adoption of the Listerian method involved certain evils, as carbolic acid poisoning, infiltration of the limb with serous exudation, and the occurrence of concealed hæmorrhage.

Mr. MACCORMAC then replied. He thought the result of the debate went to show that every surgeon used antiseptic measures; and he agreed with Sir James Paget that the question simply was which was the best method of using them. That Mr. Lister's method largely contributed to this the debate had shown. He related a case of bad compound fracture, now under treatment, as showing what might be done by Listerism; and he referred to the statistics just issued by a hospital surgeon at Cologne, who did not lose one case out of 130 capital operations, in the year 1878, treated antiseptically. The tables he showed at the last meeting met Mr. Holmes's request of comparison between the practice of two surgeons at one hospital. One of the tables gave the results in Glasgow Infirmary: in one surgeon's practice, with a mortality of 5·84 per cent. out of 1884 cases; and in another, of 2·93 per cent. out of 1706 cases. He believed that Listerism would be carried out by army surgeons; and in Germany the system was being inaugurated for the purpose of utilising it in war time.

The meeting then dissolved.

HEALTH OF LARGE ENGLISH TOWNS.

FIFTIETH WEEK OF 1879.

THE intense cold during the first week of December caused a further increase in the rate of mortality last week. In twenty of the largest English towns, containing nearly a third of the entire population of England and Wales, 5074 births and 4322 deaths were registered during the week ending last Saturday. The births were 108 below, whereas the deaths exceeded by 952, the average weekly numbers in 1878. The deaths showed a further increase of 439 upon the increasing numbers in recent weeks, and were equal to an annual rate of 30·6 per 1000 of the estimated population, against rates which rose from 21·9 to 27·4 in the six preceding weeks. During the past eleven weeks of the current quarter the death-rate in the twenty towns has averaged 23·4 per 1000, against 22·3 and 23·7 in the corresponding periods of 1877 and 1878. The lowest death-rates last week in the twenty towns were 17·8 in Sunderland, 20·2 in Portsmouth, 21·2 in Brighton, and 22·0 in Oldham. The rates in the other towns ranged upwards to 33·4 in Birmingham, 35·1 in Plymouth, 36·7 in Salford, and 41·4 in Liverpool.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 551 and 534 in the two preceding weeks, rose last week to 588; they included 188 from scarlet fever, 179 from measles, and 127 from whooping-cough. The annual death-rate from these seven diseases averaged 4·2 per 1000 in the twenty towns; while it did not exceed 0·5 in Brighton, and 1·2 both in Portsmouth and Norwich, it was equal to 5·6 and 8·3 in Plymouth and Liverpool respectively. The proportional fatality of scarlet fever was largest in Newcastle-upon-Tyne, Liverpool, and Bristol; and of measles, in Nottingham, Liverpool, and Plymouth. The deaths from whooping-cough showed an increase upon recent weekly numbers; while those from fever and diphtheria were less numerous. Small-pox caused 3 more deaths in London, but not one in any of the large provincial towns. The Metropolitan Asylum Hospitals contained 38 small-pox patients on Saturday last, against 46 and 37 at the end of the two preceding weeks; 10 new cases were admitted during the week.

The mortality returns for the metropolis, which are pub-

lished in greater detail than are those for the provincial towns, enable us to analyse the causes of the excess in the death-rate last week. The 2132 deaths registered in London last week exceeded the average number in the corresponding week of the last ten years by 322, while the excess in the previous week was but 86. The deaths referred to the diseases of the respiratory organs were 777, against numbers increasing steadily from 190 to 612 in the nine preceding weeks, and exceeded the corrected weekly average by 275. It follows, therefore, that no less than 85 per cent. of the excess in the London death-rate last month was due to diseases of the respiratory organs, mainly to bronchitis, to which no less than 559 deaths were referred. It is scarcely necessary to say that elderly persons have been the greatest sufferers; the weekly deaths in London of persons aged upwards of sixty years, which ranged between 272 and 307 in the five weeks ending 15th November, rose to 548 last week. The annual death-rate from diseases of the respiratory organs and phthisis was equal to 13·6 per 1000 in London last week, and to 17·2 in Liverpool.

Correspondence.

"Audi alteram partem."

BADER v. GORDON.

To the Editor of THE LANCET.

SIR,—In the comments that have appeared in the last number of your journal upon the recent trial of Bader *v.* Gordon there are some statements which may lead to an erroneous impression. As I was present throughout the trial, as my name is mentioned, and as some interesting ethical and scientific questions are raised, I shall be glad to be permitted through the same widely-circulated medium to offer a few explanatory comments.

In the first place, it is stated that Mr. Bowman and myself were called on the side of the defendant, Gordon. As a matter of fact, I received a subpœna from both sides, and I presume that I was called because I was consulted by the defendant on one occasion long before this trial was on the *tapis*, and because it was supposed by him that the opinion I then gave him might assist his case. I was not in any way retained as an expert to oppose other evidence, and I entered the witness-box with the anxious wish and firm determination to answer such questions as might be put to me by counsel on either side truthfully and impartially, and in such a manner as would bear the strictest professional criticism; and this was equally conspicuous in the evidence given by Mr. Bowman, and indeed, as it seemed to me, by all the medical evidence. This is my reply to the statement that "there was the usual sad want of harmony in the medical evidence." The only question upon which I could trace any difference of opinion was, How far it is desirable to remove a cataract from one eye when the other possesses normal vision? So much may be said on both sides that it may be fairly considered an open question. When I stated in court that, if such were my condition, I would not submit myself to an operation, I merely gave a personal opinion, which was not improbably at variance with the other oculists present, but which I should be prepared to defend, as I think, with some strong arguments, as well as some striking examples to which I drew attention when in court.

I am reported to have said in the witness-box "that I would not have operated, as I might have done harm, but I could not have done any good." It is quite true that I said this, but it was in reply to a very different sort of question to that of removing a fully-formed cataract. The defendant's case was that at the time he consulted the plaintiff he had much useful sight in the affected eye; in fact, to such an extent as to enjoy binocular vision, and this seemed to be confirmed both by the notes and in the evidence of the plaintiff; for in the former there were sketches showing opaque strim radiating towards the centre of the lens, and in the latter these strim were described, and the fundus was so far examined that a detachment of the retina, which was at the first visit feared, was at the second, when the pupil was artificially dilated, ascertained not to exist, and the case was pronounced favourable as far as the retina was concerned. Surely this ophthalmoscopic examination could only have been made through a lens that was only very slightly affected with opaque strim. Finding, then, that the testimony both of the defendant and the plaintiff harmonised upon this point, when I was asked if, under such conditions as I have above described, I would operate, I replied in the negative and in the terms above stated. In this opinion I think I shall be supported by every prudent and scientific oculist. It is most important, both in the interest of patients and for our own peace of mind, that we should not by any act of ours deprive a patient of anything upon which he still sets a value, even though our ultimate aim may be to restore to him some measure of that which we may know he is gradually losing.

I remain, Sir, your obedient servant,

Harley-street, Dec. 16th, 1879. GEORGE CRITCHETT.

THE NEW ARMY MEDICAL WARRANT.

To the Editor of THE LANCET.

SIR,—Will you allow me to invite your attention to two or three clauses of the new Army Medical Warrant, of considerable importance to army medical officers, which appear to have escaped your notice.

No. 426 clause of the old Warrant, now cancelled, states, that medical officers shall have a *right* to retire after twenty years' service.

Clause No. 22 of the new Warrant runs thus:—A medical officer, after completing ten years' service, may be *permitted* to retire on the gratuity or pension laid down in Article 47, *when it shall be deemed expedient* by our Secretary of State, &c.

By the old Warrant a medical officer, after twenty years' service and upwards, desiring to leave the army, need only apply to retire; his resignation must be accepted without favour or affection, and he was perfectly free to make any plans for his future life he might think fit, without any fear of interference. If invalided, he received 16*s.* 6*d.* after twenty years' service, and 20*s.* on the completion of twenty-five years' service; he was able almost invariably to procure a Medical Board, so that practically he could command 20*s.* a day after twenty-five years' service.

But how stands the matter now? Unlimited power is placed in the hands of the Director-General! for, of course, the Commander-in-Chief would sanction, and the Secretary of State approve, whatever the Director-General recommended. A medical officer in favour would naturally find no difficulty placed in his way of retirement; but, should he be without interest or have given offence to the authorities, a dearth of medical officers, or any excuse the Director-General of the time might choose to give, would suffice to prevent his resignation being accepted, however urgent his reason for retirement might be; if in ill-health he can only obtain temporary half-pay, and if of a sound constitution he must go wherever he may be ordered, no matter at what sacrifice, or absent himself, and so render himself liable to the penalty of having his name removed from the Army List, and his pay and right to pension forfeited. But supposing he is permitted to retire, even then the new Warrant claims his services, if required, up to the age of fifty-five; so that after a medical officer has purchased or worked himself into a practice, or obtained some lucrative appointment in civil life, he suddenly receives a letter saying a national emergency has arisen, and that his services are required far away from his residence: he must then throw up his means of livelihood, and probably never be able to reclaim them. All this uncertainty for an extra 2*s.* 6*d.* a day! Besides, would not this liability to be removed at any moment tend greatly to diminish his chance of obtaining any civil appointment?

In the new Warrant exchanges are allowed, but as the conditions and regulations are not published, we are unable to form any opinion of the question.

Clause No. 10 of Secretary of State's instructions on the new Warrant is not satisfactory. As the private of the Army Hospital Corps is deprived of departmental pay when employed as a servant, he would not serve an officer unless the remuneration were equal to that received when departmentally employed; the sum is nearly double that ordinarily given by combatant officers to soldier servants.

If, in addition to the above defects of the new Warrant,

the report be true that the object of ousting brigade-surgeons is to gradually absorb the deputy surgeons-general, and thereby have the administrative duties more economically performed, I think we must admit that the new Warrant is no very great boon, and that the old adage, "All is not gold that glitters," is not inapplicable.

I am, Sir, yours, &c.,

Dec. 15th, 1879. X.

To the Editor of THE LANCET.

SIR,—Can you explain why the recent Royal Warrant, the purport of which is supposed to be the improvement of the position of officers of the Army Medical Department generally, should deal so unjustly with medical officers of the Household Troops in particular? Hitherto promotion to the rank of surgeon-major has been given to surgeons on completion of twelve years' service, irrespective of its locality, whilst those of the Household Troops could only be promoted according to regimental vacancies, it not being uncommon for a surgeon to wait considerably over twenty years for his step, as is actually the case of two officers at the present time. Surely this was penalty enough for the honour and pleasure of serving in such distinguished corps, but under the new Warrant the penalty is increased in two respects. 1. The pay of a surgeon of fifteen years' service, which under the old Warrant was 17*s.* 6*d.* a day, is now reduced to 15*s.*, and as surgeons of the Household Troops are the only medical officers unpromoted at that length of service, the new Warrant is distinctly a penal one to them in this respect. 2. Under the new Warrant no surgeon can be promoted to the rank of surgeon-major unless he has three years' foreign service, and as it is unusual for the Household Troops to go abroad except in great wars, it follows that many of their surgeons are ineligible for promotion on account of their having no foreign service at the present time, although through no fault of their own. Why should this unjust distinction exist? The surgeons of the Household Troops are in no degree inferior to those of the general service in professional knowledge or status. On the contrary, most of them have been selected for service with these distinguished corps on account of their special abilities, and in competition with other candidates at the Netley examinations, have always been found at the top of the list. The State requires the services of these officers, and it should not place them in a professional position inferior to their brethren of the general service simply because their duties, though heavy in comparison, are rendered more pleasant by regimental associations.

THE LANCET, last week, described the new Warrant as bearing the evidence of being a temporary measure. May we hope that it will prove so in the respects which I have pointed out?

Yours obediently,

Dec. 1879. ARMY SURGEON.

To the Editor of THE LANCET.

SIR,—Although agreeing with the remarks made in your leader of the 13th inst., on the practical difficulty of satisfactorily dividing the mode of admission into the Army Medical Service between open competition and nomination by the medical schools, I beg leave to bring to your notice that through a misquotation (of Clause 10 of the Royal Warrant) or misprint in the article referred to, the word "procedure" is made to stand for "precedence," and that the sense and intention of the Warrant being thereby entirely misinterpreted, your remarks on the provisions contained in Clause 10 are rendered inapplicable. It is one thing to express the intention of fixing, when the occasion may arise, the order of "precedence" in which the medical schools may be permitted to nominate candidates, but quite another to promise to define the order of "procedure" by which the Schools are to be allowed to fill up existing vacancies. As I take it, the latter plan is intended to be acted on only as a *pis aller* when competition may be found to have failed in providing the necessary number of candidates. Judging from the numbers who have already presented themselves, that time is likely to continue in the remote future.

I have a very extensive acquaintance with the views of army medical officers on the subject, and I can assure you that although in all matters of trifling detail there may be diversities of views among them, the weight of opinion of the most thoughtful and experienced men in the department is, that a fair effort to fulfil all the requirements of the department and the profession has been made by the Government, and that the Warrant should be frankly accepted, and the inevitable difficulties of working it out encountered and rendered in a fair and loyal spirit.

Yours, &c.,

Dec. 17th, 1879. SURGEON-MAJOR.

*** The *misprint* in our leader, "procedure" for "precedence," does not in the smallest degree affect the argument. If the medical schools are not to have the boon of nomination, why hold out the prospect to them? If the reasoning of our correspondent were accurate, the case would be worse than we supposed it to be.—ED. L.

THE HOSPITAL FOR SICK CHILDREN, PENDLEBURY.

To the Editor of THE LANCET.

SIR,—As the status of medical officers to public institutions concerns the profession generally, I feel bound to state in your columns my reasons for resigning the office of physician to the Children's Hospital, Pendlebury, which office I have held for nearly three years. On Nov. 25th, in answer to a summons, I attended a meeting of the House Committee, held at the rooms of the consulting physician to the hospital, at which I was informed that I was suspended from my work at the institution until the next ensuing meeting of the Board of Governors. The bald statement of the reason for my suspension was, that having communicated to one of the sisters the substance of a conversation held with the lady superintendent respecting the said sister, I had committed an act subversive of discipline. Three questions, involving simple affirmative replies as to the date of the above interview, &c., were put to me, but I was afforded no opportunity of explanation or defence. The circumstance referred to was briefly as follows:—One of the sisters of the hospital informed me that she had resigned her post in consequence of the lady superintendent having reprimanded her for reproving a nurse who had neglected her duty. As the sister had commended herself to me by her diligence and zeal in the management of one of my wards, I felt interested in her case, and could not refuse, at her request, to undertake to communicate with the lady superintendent, with a view to ascertain the precise grounds of her loss of favour.

Accordingly I saw the lady superintendent, and expressed my regret at the loss of one of the best sisters of the hospital, and my fears with regard to the effect produced on the other nurses. Having distinctly stated that one object of my interview was to ascertain, on behalf of the sister, the reasons why she had forfeited the confidence of the lady superintendent, I did not feel that I should commit any breach of confidence in communicating the same to her. This, it seems, according to the resolution of the House Committee, was the "head and front of my offending."

After the indignity of suspending me on such grounds I could not do otherwise than tender my resignation to the Chairman of the Board, giving an account of the circumstances, and requesting at the same time a full and complete statement of the real grounds of the charges made against me. The only answer I received was that the fact of my resignation having been tendered and accepted obviated the necessity for further correspondence.

I remain, Sir, yours truly,

HENRY HUMPHREYS, M.D., M.R.C.P.,
Late Fellow of St. John's College, Cambridge.

Eccles, Dec. 15th, 1879.

THE HOSPITAL FOR WOMEN AND CHILDREN, LEEDS.—A grand bazaar has just been held for the benefit of this charity, in the Town Hall, under distinguished patronage, and with the aid of a large number of influential stall-holders, and the result has been that nearly £2000 was obtained for the purpose of utilising two large empty wards, not occupied (for want of funds). The hospital was established in 1854, and has treated some 40,000 patients without a single paid medical officer or assistant.

Obituary.

DR. HENRY STEWART,
OF DUBLIN.

THIS gentleman died at his residence in Eccles-street, Dublin, on the 3rd inst., at an advanced age. He was a graduate in medicine of the University of Edinburgh, and a Fellow of the Royal College of Surgeons in Ireland. Deceased was principally known for his charitable gift in connexion with the Institution for Imbeciles, formerly at Lucan, but now located at Palmerstown, and which, in consideration of his generosity, has been for some time designated the Stewart Institution for Imbecile Children.

RICHARD THOMAS TASKER, M.R.C.S., L.S.A.

Mr. TASKER was for five years apprenticed to Dr. Rice, of Stratford-on-Avon; after this he pursued his medical studies at St. Bartholomew's Hospital, and having obtained the diploma of the Royal College of Surgeons and the licence of Apothecaries' Hall, in 1843 he settled in practice in Melbourne, Derbyshire. He was appointed Poor-law medical officer to this district, which appointment he held till his death.

During all the years of his practice he enjoyed the confidence of both rich and poor in his neighbourhood, to whom he was a true friend, not only on account of his professional ability, but as being one who could give sound advice upon all matters.

In 1876, whilst driving with his youngest son, he met with an accident, in which his son was severely injured; this was a great shock to the father, and one from which he never completely recovered. In the summer of the present year he manifested symptoms of advanced degeneration of the heart and other organs. He now took his first holiday, but this had been delayed too long; the disease made steady progress, and proved fatal on Dec. 8th, in the 62nd year of his age.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Dec. 11th:—

Dunlop, Joseph Samuel, Coleraine.
Goldney, Arthur Charles Nelson, Shepherd's-bush-road.
Lukis, Charles Pardey, Southampton.
Wright, Herbert Elliston, Edwardston, Suffolk.

The following gentlemen on the same day passed the Primary Professional Examination:—

Paine, George Reuben Robins, St. Mary's Hospital.
Steer, William, St. Mary's Hospital.

UNIVERSITY OF CAMBRIDGE.—NATURAL SCIENCES TRIPOS, 1879.—The names of the successful candidates in this examination are as follows:—

CLASS I.

Cutfield,[3] Christ's.	Stuart,[1] C. M., St. John's.
Forbes,[3*] St. John's.	Thompson†,[1] Trinity.
Garbutt,[1] Clare.	Ward,[2] Christ's.
Nail,[3] Trinity.	Whittam,[1] Caius.
Reid,[4] St. John's.	

CLASS II.

Anderson, Trinity.	Hurry, St. John's.
Boot, Trinity.	La Touche, St. John's.
Gibson, Sidney.	Lister, St. John's.
Groom, W., Magdalene.	Trotter, Trinity.
Habershon, Trinity.	

CLASS III.

Bolton, R. H. B., Trinity.	Dowson, Christ's.
Browne.	Procter, Trinity.
Capper, Trinity.	Swift, Caius.
Clark, Trinity.	

1 Physics, Chemistry, and Mineralogy.
2 Botany.
3 Zoology, Comparative Anatomy, Human Anatomy, and Physiology.
4 Geology.
* Distinguished in Zoology and Comparative Anatomy.
† Distinguished in Physics and Chemistry.

MR. GEORGE HENRY FURBER, Surgeon to the Borough Police, has been appointed one of the Justices of the Peace for the borough of Maidstone.

COLLEGE OF PHYSICIANS IN IRELAND.—At the November examinations the following obtained the licences in Medicine and Midwifery of the College:—

MEDICINE.—Richard Winter Barney, Edward Frederick Sheehy Barry, Edmund Berry, James Joseph Harding, Hugh Harris, Charles Henry Hartt, Edmund Poole Howell Henn, Thomas Jackson, Michael Keelan, Eliza Foster MacDonogh, Francis John O'Reilly.

MIDWIFERY.—Richard W. Barney, Edward Sheehy Barry, Edmund Berry, James J. Harding, Charles H. Hartt, Edmund Howell Henn, Thomas Jackson, Michael Keelan, Eliza F. MacDonogh, Francis J. O'Reilly.

MR. ROBERT GARNER, F.R.C.S. Eng., has obtained a superannuation allowance of £100 per ann., on resigning as medical officer to the Stoke-upon-Trent Union Workhouse.

ON Tuesday evening an excellent amateur concert was given, under distinguished patronage, by Miss Pattison, at her residence, 20, Clifton-gardens, Maida-hill, in aid of the maintenance of forty new beds lately opened at the University College Hospital, Gower-street.

TESTIMONIAL.—The officers and members of the Loyal Bickham Lodge of the Manchester Unity Independent Order of Oddfellows have presented to Mr. Thomas Hawkins, surgeon of the Lodge, a massive silver inkstand, in recognition of his services during a period of twenty-one years.

ROYAL INSTITUTION.—The managers have awarded the Actonian Prize of £105 to G. S. Boulger, Esq., F.L.S., F.G.S., for an Essay on "The Structure and Functions of the Retina in all classes of animals, viewed in relation with the Theory of Evolution." Professor Tyndall will give the first of his Christmas Lectures (adapted to an educated juvenile auditory), on Saturday next, December 27, at three o'clock.

Births, Marriages, and Deaths.

BIRTHS.

CHAMPNEYS.—On the 11th inst., at Woking, the wife of Charles Thornton Champneys, L.R.C.S.Ed., of a son.

HART.—On the 9th inst., at Great Baddow, the wife of Walter Hart, L.R.C.P.Ed., of a daughter.

LAMB.—On the 11th inst., at Kensington Park Gardens, the wife of William Henry Lamb, M.B., of a son.

O'CONNOR.—On the 13th inst., at Camden-place, Cork, the wife of Denis Charles O'Connor, junr., L.R.C.P.Ed., of a daughter.

TURNBULL.—On the 8th inst., at Kelso, the wife of George H. Turnbull, M.D., of a son.

MARRIAGES.

DEWAR—ANDERSON.—At 154, Constitution-street, Leith, by the Rev. J. S. Mill, M.A., of Kirkgate U. P. Church, assisted by the Rev. Alex. Duff, of Kirriemuir, Michael Dewar, M.B. Edin., of Kirriemuir, to Agnes Baillie, eldest surviving daughter of the late James Anderson, of H.M. Customs, Leith.

FRANCIS—FOWLE.—On the 10th inst., at St. George's, Hanover-square, by the Rev. John Bennett, M.A., assisted by the Rev. W. J. A. Large, M.A., Chaplain to St. Thomas's Hospital, George Philip Francis, Surgeon, of Bourton, Dorsetshire, only son of Charles Francis, Esq., of Brecon, South Wales, to Catherine Florence, second daughter of John Fowle, Esq., of South Kensington.

JONES—LEWIS.—On the 10th inst., at Shiloh C. M. Chapel, Aberystwith, by the Rev. T. C. Edwards, M.A., Principal of the Univ. Coll. of Wales, assisted by the Rev. G. Parry, Richard Thomas Jones, L.F.P.S.G. & L.M., L.S.A.L., of Camberwell, S.E., to Maggie, youngest daughter of the late Elias Lewis, Esq., of Rhiwarthen, Aberystwith.

DEATHS.

DAVIS.—On the 11th inst., at Waterloo-road, Dublin, John N. C. A. Davis, F.R.C.S.I., Deputy Inspector-General of Hospitals, Army Medical Department.

DUNLOP.—On the 6th inst., at Blacket-place, Edinburgh, John Dunlop, M.D., Deputy Inspector-General of Hospitals and Fleets.

GEORGE.—On the 4th inst., at Weston-super-Mare, Richard Francis George, M.R.C.S.E., aged 81.

MACDONALD.—On the 7th inst., at Lynedale House, Isle of Skye, John Macdonald, M.D., of Buenos Ayres.

MACLURE.—On the 13th inst., at Harley-street, Duncan Maclachlan Maclure, M.B.

MILLER.—On the 25th ult., at Wrentham, Thomas Corne Miller, M.R.C.S.E.

MORRIS.—On the 11th inst., at Combe Down, Bath, Trevor Morris, M.D., aged 84.

O'CONNELL.—On the 13th inst., at Templemore, co. Tipperary, Daniel O'Connell, L.R.C.P.Ed., aged 38.

THOM.—On the 11th ult., at Lahore, Edward Thom, M.D., Surgeon-Major, Bengal Medical Service, aged 48.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

CONTRIBUTORS FOR 1880.

THE following Gentlemen have intimated their intention of contributing to the columns of THE LANCET during the year 1880. In addition to the provision thus made, we have arranged for the publication of many special Lectures.

ABBOTT, G., M.R.C.S. Eng., Assistant-Surgeon to the Royal London Ophthalmic Hospital; Surgeon to the Tunbridge Wells Ophthalmic Dispensary.

ADAM, A. M., M.D. Edin., Medical Officer to the Boston Cottage Hospital.

ADAMS, JAS., M.D. Aberd., Surgeon to the Ashburton and Buckfastleigh Cottage Hospital.

ADAMS, J. E., F.R.C.S. Eng., Surgeon to the London Hospital; Assistant-Surgeon to the Royal London Ophthalmic Hospital, Moorfields.

ADAMS, M. A., F.R.C.S. Eng., Surgeon to the Kent County Ophthalmic Hospital.

ALDRICH, P., M.R.C.S. Eng., Medical Officer to the 1st District and Workhouse, Mildenhall Union.

ALEXANDER, R. G., M.B. Edin., Senior Physician to the Bradford Infirmary and New Fever Hospital.

ALEXANDER, W., M.D. Qu. Univ. Irel., Visiting Surgeon to the Liverpool Workhouse Hospital.

ALEXANDER, W., M.D. Edin., Senior Physician to the Halifax Infirmary and General Dispensary.

ALFORD, G. E., M.R.C.S. Eng., Weston-super-Mare.

ALLBUTT, H. A., L.R.C.P. Edin., Physician to the Leeds Dispensary for Diseases of the Skin.

ALLBUTT, T. CLIFFORD, M.D. Cantab., Physician to the Leeds General Infirmary, Leeds Dispensary, and Leeds Fever Hospital.

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ALTHAUS, J., M.D. Berlin, Senior Physician to the Hospital for Diseases of the Nervous System, London.

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ANDERSON, T., M.D., Medical Officer to the York Eye Institution; Surgeon to the North-Eastern and Great Northern Railway Companies.

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ARMSON, C. G., L.F.P.S. Glas. and L.M., Surgeon to the Yoxall Cottage Hospital.

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BALL, Professor, Paris.

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BATT, A., M.D. St. And., M.R.C.S. Eng., Medical Officer to the Witney Union House and District; Deputy Coroner for the West District of Oxfordshire.

BAXTER, E. B., M.D. Lond., Senior Physician to the Evelina Hospital for Sick Children; Assistant-Physician to King's College Hospital.

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BELCHER, P., M.R.C.S. Eng., Surgeon to the Burton-on-Trent Infirmary; Medical Officer to the Union Infirmary.

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COLE, T., M.D. Lond., Physician to the Royal United Hospital, Bath.

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COLLIER, N. C., L.R.C.P. Edin., L.S.A. Lond., Medical Officer of Health to the Fulham District.

COOK, F., M.D. Edin., Physician to the General Hospital, Cheltenham.

COOK, W. H., M.D. Edin., Medical Officer to the Hampstead Parochial Dispensary and Infirmary; Senior Surgeon to the Hampstead Dispens

COOKE, T., F.R.C.S., Senior Assistant-Surgeon to the Westminster Hospital.

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CUMBERBATCH, A. E., M.B. Lond., F.R.C.S. Eng., Aural Surgeon to the Great Northern Hospital; Demonstrator of Anatomy to St. Bartholomew's Hospital Medical School.

CUMMING, H. G., M.R.C.S. Eng., House-Surgeon to the Devon and Exeter Hospital, Exeter.

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CUTHBERTSON, J. M., F.F.P.S. Glasg., L.R.C.P. Edin., Medical Officer to the Droitwich District, Droitwich Union.

DALE, W., M.B., M.R.C.S. Eng., Physician to the West Norfolk and Lynn Hospital.

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DAVIDSON, A., M.D., Physician to the Royal Infirmary, Liverpool.

DAVIDSON, A. D., M.D., Ophthalmic Surgeon to the Royal Infirmary, Aberdeen; Surgeon to the Aberdeen Ophthalmic Institution, Blind Asylum, and Female Orphan Institution.

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DRUMMOND, D., M.D. Dub., Physician to the Children's Hospital, Newcastle-on-Tyne; Lecturer on Physiology to the University of Durham.

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DYSON, W., M.D., Physician to the Sheffield Public Hospital and Dispensary.

EADE, P., M.D. Lond., Physician to the Norfolk and Norwich Hospital.

EDIS, A. W., M.D. Lond., Assistant Obstetric Physician to the Middlesex Hospital; Physician to the British Lying-in Hospital and to the Dressmakers' Provident and Benevolent Institution.

EDDOWES, A. B. J., M.R.C.S. Eng., Honorary Surgeon to the Loughborough Infirmary and Dispensary.

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EDWARDS, R., M.R.C.S. Eng., Medical Officer of Health to the Bala Union District, North Wales.

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ELLIS, W. H., M.R.C.S. Eng., Surgeon to the Saltaire Infirmary, Yorkshire.

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